

**CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION
UNDER 37 CFR 1.102(e) (Page 1 of 1)**

First Named Inventor:	M. YOSHIDA	Nonprovisional Application Number (if known):	
Title of Invention:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently \$0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.
2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.
3. The applicable box is checked below:

I. ☒ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

- i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.
---OR---
(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.
- ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, or the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

- i. A request for continued examination has been filed with, or prior to, this form.
- ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
- iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
- iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
- v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature <u>/JOHN R. MATTINGLY/</u>	Date <u>November 9, 2022</u>
Name (Print/Typed) <u>JOHN R. MATTINGLY</u>	Practitioner Registration Number <u>30293</u>
Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.*	
☒ *Total of <u>1</u> forms are submitted.	

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.

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	ASA-9940-06
		Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
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		
	Mari		YOSHIDA			
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	24956		
Email Address	ptomail@mmiplaw.com		Add Email Remove Email

Application Information:

Title of the Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
Attorney Docket Number	ASA-9940-06	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	12	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	ASA-9940-06
		Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		

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	24956		

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	17397040	2021-08-09

Application Data Sheet 37 CFR 1.76		Attorney Docket Number		ASA-9940-06	
		Application Number			
Title of Invention		RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF			

Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
17397040	Continuation of	15898351	2018-02-16	11094350	2021-08-17
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15898351	Continuation of	14478020	2014-09-05	10176848	2019-01-08
Prior Application Status		Patented		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14478020	Continuation of	12430185	2009-04-27	9159368	2009-11-19
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.					

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
2008-130678		JP	2008-05-19		
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	ASA-9940-06
	Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF	

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	ASA-9940-06
		Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		

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	Maxell, Ltd.			
Mailing Address Information For Applicant:				
Address 1	1, Koizumi, Oyamazaki, Oyamazaki-cho Otokuni-gun			
Address 2				
City	Kyoto	State/Province		
Country	JP	Postal Code		
		618-8525		
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	ASA-9940-06
		Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		

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		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	/John R. Mattingly/		Date (YYYY-MM-DD)	2022-11-09	
First Name	John	Last Name	Mattingly	Registration Number	30293
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	ASA-9940-06
		Application Number	
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		

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.

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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)).
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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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s) : M. YOSHIDA
Serial No. : To be assigned
Filed : November 9, 2022
For : RECORDING AND REPRODUCING APPARATUS AND
METHOD THEREOF
Group : To be assigned
Examiner : To be assigned
Docket No. : ASA-9940-06
Customer No.: 24956

Confirmation No.: TBD

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

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

November 9, 2022

Sir:

In the matter of the above-identified application, Applicants are 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.

Applicants note that:

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 No. 17/397,040, filed August 9, 2021, which is 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).

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417.

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
Registration No. 30,293
703-684-1120

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	2022-11-09
	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-06

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	7496211	B2	2009-02-24	Yamagami; Rui	
	2	7853897		2010-12-14	Ogawa et al.	Corr. to JP 2008017041
	3	7474764		2009-01-06	Segawa et al.	Corr. to JP 2006074463
	4	5809202		1998-09-15	Gotoh et al.	
	5	7496211		2009-02-24	Yamagami et al.	
	6	7634662		2009-12-15	Monroe, David A.	
	7	10169646	B2	2019-01-01	GANONG et al.	
	8	6810149	B1	2004-10-26	SQUILLA et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2022-11-09
	First Named Inventor	YOSHIDA, M.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

9	7522773	B2	2009-04-21	GALLAGHER et al.	
10	7587068	B1	2009-09-08	STEINBERG et al.	
11	7760917	B2	2010-07-20	VANHOUCKE et al.	
12	7783085	B2	2010-08-24	PERLMUTTER et al.	
13	7787697	B2	2010-08-31	RITZAU et al.	
14	7801910	B2	2010-09-21	HOUH et al.	
15	7835552	B2	2010-11-16	DOI	
16	7847815	B2	2010-12-07	PATEL et al.	
17	7860854	B2	2010-12-28	LIPSON et al.	
18	7881505	B2	2011-02-01	SCHNEIDERMAN et al.	
19	7991714	B2	2011-08-02	WIDROW et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2022-11-09
	First Named Inventor	YOSHIDA, M.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

	20	8036430	B2	2011-10-11	TOKUSE	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2022-11-09
	First Named Inventor	YOSHIDA, M.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

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

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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)	2022-11-09
Name/Print	John R. Mattingly	Registration Number	30,293

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Application Number	
Filing Date	November 9, 2022
First Named Inventor	M. YOSHIDA
Title	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
Art Unit	
Examiner Name	
Attorney Docket Number	ASA-9940-06

SIGNATURE of Applicant or Patent Practitioner			
Signature	/John R. Mattingly/	Date (Optional)	November 9, 2022
Name	John R. Mattingly	Registration Number	30293
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			
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.			
☒ *Total of 2 forms are submitted.			

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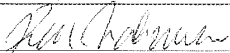
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署名 Signature		署名日（任意） Date (Optional)	January 14th, 2022
氏名 Name	Keiji Nakamura		
役職 Title	President and Representative Director		

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RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

INCORPORATION BY REFERENCE

5 This application is a continuation of Application Serial No.
17/397,040, filed August 9, 2021, which is a continuation of
Application Serial No. 15/898,351, filed February 16, 2018, now U.S.
Patent No. 11,094,350, which is a continuation of Application Serial
No. 14/478,020, filed September 5, 2014, now U.S. Patent No.
10,176,848, which is a continuation of Application Serial No.
10 12/430,185, filed on April 27, 2009, now U.S. Patent No. 9,159,368,
which claims the benefit of Japanese Application No. JP 2008-130678
filed on May 19, 2008, in the Japanese Patent Office, the disclosures
of which are incorporated herein by reference.

15 BACKGROUND OF THE INVENTION

The present invention related to a recording and reproducing
apparatus and a recording and reproducing method, suitable for
application to, e.g., a video camera.

20 In recent years, recording and reproducing apparatus are a
widespread use which apparatus are compatible with randomly accessible
recording media such as a digital versatile disc (DVD), a semiconductor
memory and a hard disc drive (HDD). Such recording and reproducing
apparatus can easily and quickly cue a photographed image recorded in a
recording medium.

25 Of recording and reproducing apparatus of this type, for example, a
general video camera manages generally video information of
photographed images in the unit of scene, and cues each scene by using

management information on each scene. A video camera of this type can set a plurality of chapters in one scene, and can cue each chapter.

A scene means a series of images recorded
5 during a period from when a user depresses a record button to start photographing to when the user depresses again the record button to stop photographing. The number of scenes increases each time photographing is made upon depression of the
10 record button. The chapter means a delimiter of images in one scene.

A user of a video camera can know quickly the contents of each scene by reproducing image information recorded in the recording medium by sequentially cuing
15 each chapter.

However, if the number of chapters set in a scene is large, a user of the video camera is required to repeat a cue operation as many times as the number of chapters set in the scene, in order to confirm the
20 contents to the last scene. There arises therefore a problem of much work and long time.

JP-A-06-165009 discloses techniques of efficiently knowing the contents of a scene by calculating a priority order of each frame from the
25 type of button manipulation during photographing, and reproducing a frame having a higher priority order.

SUMMARY OF THE INVENTION

The capacity of a recording medium of a recent video camera is becoming large so that a scene photographed in a long time duration can be stored in the recording medium or scenes photographed a plurality
5 of times can be stored in the recording medium. It is therefore difficult for a user to quickly find a target scene from a number of scenes recorded in the recording medium.

Some conventional recording and reproducing
10 apparatus are equipped with a function of displaying a list of thumbnail images of scenes. However, this function displays only one thumbnail image per one scene so that a user feels difficult in some cases to know the whole contents of a scene photographed in a
15 long time duration from one thumbnail image. Further, after a lapse of long time after photographing, it is difficult for a user to remember the whole contents of a scene from one corresponding thumbnail image.

If a user cannot remember the contents of a
20 scene even if the thumbnail image is viewed, the user confirms the contents of the scene by reproducing the scene. If the contents of a long time scene is to be confirmed, it becomes necessary to provide a function of confirming quickly the whole contents of the scene
25 by cuing each chapter. However, this function has not been proposed yet.

JP-A-06-165009 discloses techniques of calculating a priority order of each frame from the

type of button manipulation during photographing, and when digest reproduction for knowing the contents of a scene is to be performed, reproducing a frame having a higher priority order. According to the techniques,
5 however, a priority degree cannot be set to a scene photographed without button manipulation by a user. It cannot be said that the techniques are easy to use.

The present invention has been made in consideration of the above-described issues, and
10 provides a recording and reproducing apparatus and a recording and reproducing method allowing a user to rapidly and easily find a target chapter or scene.

In order to settle these issues, the present invention provides a recording and reproducing
15 apparatus capable of setting one or more chapters to each scene, comprising: a recording and reproducing unit for recording and reproducing image information on the scene obtained through photographing, relative to a predetermined first recording medium; a face
20 recognizing execution unit for executing a face recognizing process for a photographed image based on the image information; an importance level setting unit for setting an importance level of each chapter in accordance with a result of the face recognizing
25 process for a very important person (VIP) set by a user; and a control unit for controlling the recording and reproducing unit so as to selectively reproduce each chapter having a relevant importance level, among

importance levels of respective chapters.

Accordingly, the recording and reproducing apparatus of the present invention can selectively reproduce a particular chapter in accordance with user
5 settings, such as a chapter on which a VIP appears frequently.

The present invention provides further a recording and reproducing method for a recording and reproducing apparatus for recording and reproducing
10 image information on a scene obtained through photographing, relative to a predetermined first recording medium and being capable of setting one or more chapters to each scene, the method comprising: a first step of executing a face recognizing process for
15 a photographed image based on the image information; a second step of setting an importance level of each chapter in accordance with a result of the face recognizing process for a VIP set by a user; and a third step of selectively reproducing each chapter
20 having a relevant importance level, among importance levels of respective chapters.

Accordingly, the recording and reproducing method of the present invention can selectively reproduce a particular chapter in accordance with user
25 settings, such as a chapter on which a VIP appears frequently.

According to the present invention, a user can therefore find an object chapter and scene quickly

and easily.

Other objects, features and advantages of the invention will become apparent from the following description of the embodiments of the invention taken
5 in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a block diagram illustrating the structure of a video camera according to first and second embodiments.

10 Fig. 2 is a conceptual diagram illustrating an example of chapter management information.

Fig. 3 is a conceptual diagram illustrating an example of face recognizing management information.

15 Fig. 4 is a conceptual diagram illustrating an example of a photographed image when face recognizing is made valid.

Fig. 5 is a flow chart illustrating the sequence of a photographed image recording process.

20 Fig. 6 is a flow chart illustrating the sequence of a chapter importance level setting process.

Fig. 7 is a brief diagrammatic view illustrating an example of the layout of a VIP determining screen.

25 Fig. 8 is a flow chart illustrating the sequence of an importance level determining process.

Fig. 9 is a table illustrating an example of the chapter arrangement of an object scene and a

chapter importance level set to each chapter.

Fig. 10 is a flow chart illustrating the sequence of a chapter selecting and reproducing process.

5 Fig. 11 is a brief diagrammatic view illustrating an example of the layout of a chapter list screen.

 Fig. 12 is a brief diagrammatic view illustrating an example of the layout of a scene list
10 screen.

Fig. 13 is a flow chart illustrating the sequence of a VIP setting process.

Fig. 14 is a brief diagrammatic view illustrating an example of a layout of a pre-
15 photographing VIP setting screen.

Fig. 15 is a brief diagrammatic view illustrating an example of the layout of a VIP photographing screen.

DESCRIPTION OF THE EMBODIMENTS

20 Embodiments of the present invention will now be described with reference to the accompanying drawings.

(1) First Embodiment

(1-1) Structure of Recording and Reproducing Apparatus

25 In Fig. 1, reference numeral 1 represents a video camera of the embodiment. The video camera 1 is a hybrid video camera equipped with a DVD drive (not

shown) and a built-in hard disc drive 2. A DVD 3 to be mounted on the DVD drive includes a plurality of types such as DVD-R, DVD-RW, DVD-RAM, DVD + R, DVD + RW and HD (High Definition)-DVD. The type of DVD 3 applicable
5 to the video camera 1 is not specifically limited.

In the video camera 1, a user interface 4 is constituted of various operation buttons, a touch panel adhered to a screen of a display 6 to be described later. In accordance with a user operation command
10 input from the user interface 4, a system controller 5 executes a corresponding control process to record a photographed image in the hard disc drive 2 and DVD 3 loaded in the DVD drive and to reproduce a photographed image recorded in the hard disc drive 2 and DVD 3 and
15 display the reproduced image on the display 6.

The system controller 5 is actually a microcomputer constituted of a central processing unit (CPU), an internal memory and the like. When a record button in the user interface 4 is depressed after a
20 record mode is selected upon operation of the user interface 4, the system controller 5 drives an image sensor 7 constituted of a charge coupled device (CCD), complementary metal oxide semiconductor (CMOS) transistors and the like.

25 An optical image of an object is converged by a lens 8 on an optical reception plane of the image sensor 7. The image sensor 7 photoelectrically converts the optical image, and sends an obtained

photographed image signal to an analog/digital converter 9. The analog/digital converter 9 converts the analog photographed image signal into a digital image signal, and sends the obtained digital
5 information to a compressor/decompressor (CODEC) 10.

CODEC 10 transfers the supplied image information to the display 6 via a bus 11. The display 6 may be a liquid crystal display, an organic EL display or the like, and displays a photographed image
10 (through image) basing upon the supplied image information.

CODEC 10 encodes the supplied image information by a predetermined compression encoding method such as a Moving Picture Expert Group (MPEG)
15 method, and stores the obtained encoded image information, and the image information not subjected to encoding, in a random access memory (RAM) 12 via the bus 11.

Under control of the system controller 5, the
20 encoded image information stored in RAM 12 is thereafter read by a hard disc drive controller 13 or a DVD drive controller 14, and recorded in the hard disc drive 2 or DVD 3.

The image information stored in RAM 12 is
25 read by a face recognizing execution unit 15. The face recognizing execution unit 15 executes a predetermined face recognizing process for the photographed image corresponding to the image information, and supplies

the recognition results to the hard disc drive controller 13 or DVD drive controller 14 storing the encoded image information, as face recognizing management information to be described later. In this manner, the face recognizing management information is recorded in the hard disc drive 2 or DVD 3, in correspondence with the encoded image information.

When a reproduction button of the user interface 4 is depressed after a reproduction mode is selected upon operation of the user interface 4, the system controller 5 controls a corresponding one of the hard disc drive controller 13 and DVD drive controller 14 to make the hard disc drive controller 13 or DVD drive controller 14 read and transmit the encoded image information to CODEC 10 via the bus 11.

Under control of the system controller 5, CODEC 10 executes a predetermined decoding process for the encoded image information supplied from the hard disc drive controller 13 or DVD drive controller 14, and transmits the obtained reproduced image information to the display 6 via the bus 11. In this manner, a reproduced image corresponding reproduced image information is displayed on the display 6.

An image size converter 16 is also connected to the bus 11. Under control of the system controller 5, the image size converter 16 extracts image information on a start frame of each scene and image information on a start frame of each chapter, from the

image information stored in RAM 12 and image
information read from the hard disk drive 2 or DVD 3
and decoded by CODEC 10, for example, during
photographing. The image size converter 16 converts
5 the extracted image information into image information
on thumbnail images of predetermined sizes, and stores
the image information on the thumbnail images of a
start frame of the scene and a start frame of each
chapter in the hard disc drive 2 or DVD 3 storing the
10 encoded image information on the scene, in
correspondence with the scene.

It is assumed that the video camera 1 has
other hardware and functions of a general video camera,
such as light emitting diodes (LED's) for turning on
15 during power-on, charging, access to the hard disc
drive 2 or DVD 3, or the like, and batteries for
supplying power to each circuit or the like.

In the following description, it is assumed
that a photographed image is recorded in the hard disc
20 drive 2 during photographing, and the photographed
image is dubbed in DVD 3 after photographing. However,
a photographed image may be recorded in DVD 3 during
photographing, and the photographed image is dubbed in
the hard disc drive 2 after photographing.

25 (1-2) Scene Management Information

During photographing with the video camera 1,
encoded image information as well as management
information of each scene (hereinafter called scene

management information) is recorded in the hard disc drive 2. The scene management information is constituted of information for managing a scene such as chapter management information and face recognizing management information. The chapter management information includes information on a position, length, importance level, summary and the like of a start frame of each chapter. The face recognizing management information includes information on a position of a frame on which a face recognized by the face recognizing execution unit appears during photographing, an expression and size of the face on the frame, and the like.

Fig. 2 illustrates an example of the chapter management information. The chapter management information 20 illustrated in Fig. 2 is constituted of chapter ID information 21, start frame position information 22 and chapter importance level information 23, respectively of each chapter set in a scene.

The chapter ID information 21 is information representative of a unique ID given to each chapter (hereinafter called a chapter ID), and the start frame position information 22 is information representative of a position (hour, minute, second and frame number) of a start frame of the corresponding chapter. The chapter importance level information 23 is information representative of an importance level set to the corresponding chapter (herein after called a chapter

importance level). The details of the chapter importance level will be described later. Under control of the system controller 5, the chapter management information 20 is stored in the hard disc drive 2 in correspondence with the encoded image information of the scene.

Fig. 3 illustrates an example of the face recognizing management information. The face recognizing management information 24 illustrated in Fig. 3 is constituted of face ID information 25 for each face recognized in the corresponding scene, path/file name information 26 and frame position information 27.

The face ID information 25 is information representative of a unique ID given to each face recognized by the face recognizing execution unit 15 (hereinafter called a face ID), and the path/file name information 26 is information representative of a path to the image file of an image of a corresponding face (hereinafter called a face image) or a file name of the image file. A face image to be stored in the image file may be an image captured when the person is recognized first in a frame, or an image capturing the best expression of the person in the scene after distinguishing a good expression such as smile during the face recognizing process.

The frame position information 27 is information representative of a frame position (hour,

minute, second and frame number) where a corresponding face is recognized. The frame position information 27 includes all frame positions on which a corresponding face appears. Therefore, the number of frame positions
5 contained in the frame position information 27 becomes larger the larger the number of times when the face (person) appears on the scene. A type of a face expression in a frame may be recorded in correspondence with each frame position.

10 As described above, the face recognizing execution unit 15 stores the face recognizing management information 24 in the hard disc drive 2 in correspondence with the encoded image information of a photographed image recorded at that time.

15 (1-3) Chapter Importance Level Setting Method

 Fig. 4 illustrates an example of an image photographed by setting a face recognizing function "valid" and displayed on the display 6. As the face recognizing function of the video camera 1 is set
20 "valid", a rectangular frame 31 is displayed in a photographed image 30 displayed on the display 6, surrounding a face of a person detected by the face recognizing function. As the face recognizing function is set "invalid", this frame 31 is not displayed.

25 Fig. 5 illustrates the contents of a process (hereinafter called a photographed image recording process) of recording an image photographed by setting the face recognizing function "valid" in the hard disc

drive 2, to be executed by the system controller 5.
The system controller 5 executes the photographed image
recording process illustrated in Fig. 5 in accordance
with a corresponding control program stored in the
5 internal memory.

More specifically, as the record button of
the user interface 4 is depressed after the record mode
is selected, the system controller 5 starts the
photographed image recording process. First, the
10 analog/digital converter 9 and CODEC 10 are controlled
to store image information of the photographed image
and encoded image information in RAM 12, and the hard
disc drive controller 13 is controlled to read the
encoded image information of one frame from RAM 12 and
15 store the read encoded image information in the hard
disc drive 2 (Step SP1).

Next, the system controller 5 controls the
face recognizing execution unit 15 to read from RAM 12
the image information of the same frame as the frame
20 whose encoded image information was read from RAM 12 by
the hard disc drive controller 13 at Step SP1 and
execute the face recognizing process for the
photographed image corresponding to the image
information (Step SP2).

25 In this case, for example, the face
recognizing execution unit 15 executes the face
recognizing process by template matching, for example,
using an average face. However, if a user forms a VIP

list registering VIP's before photographing, the face recognizing process may be executed by template matching using the VIP list. After the face recognizing process is completed, the face recognizing execution unit 15 reflects the results of the face recognizing process upon the face recognizing management information described with reference to Fig. 3 (updating the face recognizing management information).

10 Next, the system controller 5 judges whether encoded image information of all frames obtained through photographing has been recorded in the hard disc drive 2 (Step SP3). If this judgment is negated, the flow returns to step SP1, and the system controller
15 5 repeats similar processes (SP1 to SP3, to SP1).

 If the judgment is affirmed at Step SP3 after the encoded image information of all frames obtained through photographing is recorded in the hard disc drive 2, the system controller 5 terminates the
20 photographed image recording process.

 The face recognizing process at Step SP2 of the photographed image recording process may be executed for each frame as described above, or may be executed once for several frames. As the face
25 recognizing process is executed once for several frames, a process load on the face recognizing execution unit 15 can be reduced.

 A function (hereinafter called a post-

photographing face recognizing function) may be provided allowing a face recognizing process to be executed for an image already photographed by setting the face recognizing function "invalid", through
5 operation of a menu or the like. The face recognizing management process similar to that illustrated in Fig. 3 can be obtained by this function. With this post-photographing face recognizing function, a chapter importance level can be set using the face recognizing
10 function as will be described later, even for a scene photographed with another video camera without the face recognizing function. This is very convenient for a user.

Next, description will be made on a method of
15 determining an importance level of each chapter in one scene in accordance with the results (face recognizing management information 24 (Fig. 3)) of the face recognizing process obtained in the manner described above.

20 It is assumed in the following that at least one chapter is set in each scene. A chapter forming method includes a method of making a user manually determine the position of each chapter, a method of automatically setting the position of each chapter
25 where a luminance change is large in the scene, a method of automatically setting chapters at equal pitch of several minutes to several ten minutes, and other methods. In this embodiment, a chapter may be set by

any one of these methods.

Fig. 6 illustrates the process contents of the system controller 5 regarding a chapter importance level setting function of setting an importance level of each chapter in a scene. As the user interface 4 is operated and a first screen display request is input, the system controller 5 executes a chapter importance level setting process illustrated in Fig. 6, in accordance with a corresponding program stored in the internal memory (not shown).

More specifically, upon input of the first screen display request, the system controller 5 reads first the chapter management information 20 (Fig.2) and face recognizing management information 24 (Fig. 3), stored in the hard disc drive 2, of a scene to be processed at that time (hereinafter called an object scene), and displays a VIP deciding screen 40 illustrated in Fig. 7 on the display 6, by using the chapter management information 20 and face recognizing management information 24 (Step SP10).

The VIP deciding screen 40 is a screen to be used for a user to decide a VIP in the object scene. The VIP deciding screen 40 displays face images 41 of all persons recognized during photographing the object scene. Each face image 41 is displayed in accordance with image data read from the image file identified by a corresponding path/file name information 26 (Fig. 3) in the face recognizing management information 24

described with reference to Fig. 3.

A user can select a VIP from the face images 41 of persons displayed on the VIP deciding screen 40. A plurality of VIP's may be selected. Faces of objects 5 having a high appearance frequency such as family members may be registered beforehand in the video camera 1 as a VIP list, and the faces of only the registered persons are displayed on the VIP deciding screen 40. In this manner, since the face of a person 10 not associated with the object and photographed in the background is not displayed, it becomes easy for a user to decide a VIP.

After the face image 41 of the person desired to be set as a VIP is selected by a predetermined 15 operation, the user depresses a "decide" button 42 to register the selected person as a VIP. If an operation of deciding the chapter importance level is desired to be terminated, a "cancel" button 43 is depressed. If it is arranged in such a manner that a user can set 20 whether such a VIP list is always used or not, user-friendliness of the video camera 1 can be improved.

Next, the system controller 5 stands by until a VIP is decided using the VIP deciding screen 40 (Step SP11). As the user decides a VIP, an importance level 25 of each chapter of the object scene is determined in accordance with the decided VIP (Step SP12).

The system controller 5 reflects the importance level of each chapter decided at Step SP12

upon the chapter management information 20 described with reference to Fig. 2 (Step SP13), to thereafter terminate the chapter importance level setting process.

Fig. 8 illustrates the specific process contents of the system controller 5 in the chapter importance level setting process at Step SP12.

In the chapter importance level setting process at Step SP12, the system controller 5 starts the importance level setting process. First, the number of appearance frequencies of the VIP decided by the user using the VIP deciding screen 40 (Fig. 7) is counted for each chapter of the object scene (Step SP14).

More specifically, the system controller 5 prepares counters corresponding in number to the number of chapters in the scene, on the inner memory of the system. The system controller 5 reads the positions of all frames on which the VIP decided by the user using the VIP deciding screen 40 appears, from the face recognizing management information 24 (Fig. 3), by using a face ID of the VIP, and judges to which chapter each frame belongs, by referring to the chapter management information 20 (Fig. 2). In accordance with the judgment results, the system controller 5 increments by "1" the count of the counter corresponding to the chapter to which the frame belongs, for each frame on which the VIP appears. The system controller 5 executes these processes for all

VIP's decided by the user using the VIP deciding screen 40.

Next, the system controller 5 normalizes the counts of the counters in a range from "1" to "5" (Step SP15), and decides a value obtained by subtracting each normalized value from "6", as an importance level of each chapter corresponding to the counter (Step SP16).

With these processes, the highest chapter importance level of "1" is set to the chapter on which the VIP appears most frequently, and the lowest chapter importance level of "5" is set to the chapter on which the VIP appears least frequently. Thereafter, the system controller 5 terminates this importance level deciding process and returns to the chapter importance level setting process.

If a user selects a plurality of VIP's on the VIP deciding screen 40, the chapter importance levels may be weighted to allow the user to set more important persons. User-friendliness of the video camera 1 can therefore be improved further.

(1-4) Reproducing Method Using Chapter Importance Level

Next, description will be made on an object scene reproducing method basing upon the chapter importance level of each chapter set in the manner described above. It is assumed in the following description that the chapter importance level is set in five steps, "1" being the highest chapter importance

level, and "5" being the lowest chapter importance level. In the following, the chapter importance levels are distinguished for the purposes of convenience by calling the chapter importance level "1" superexpress, 5 the chapter importance level "3" express, and the chapter importance level "5" standard.

Fig. 9 illustrates an example of the chapter structure of an object scene and a chapter importance level set to each chapter. In the example illustrated 10 in Fig. 9, the object scene is divided into nine chapters having chapter ID's of "001" to "009". The chapter importance level "1" is set to two chapters having the chapter ID's "002" and "005", the chapter importance level "3" is set to two chapters having the 15 chapter ID's "004" and "009", and the chapter importance level "5" is set to the remaining chapters having the chapter ID's "001", "003", "006" to "008".

In this example, as reproduction is performed by selecting as a reproducing mode a "standard 20 reproducing mode" from the menu, all chapters are sequentially reproduced in an order of smaller chapter ID, irrespective of the chapter importance level set to each chapter. Namely, in the "standard reproducing mode", the chapters having the chapter importance level 25 "5" or smaller (the chapters having the chapter importance levels "1" to "5", i.e., all chapters) are reproduced in this mode of the embodiment.

Further, as a user starts reproducing by

selecting as the reproducing mode an "express
reproducing mode", the video camera 1 reproduces first
the chapter having the chapter importance level "1" and
chapter ID "002", then the chapter having the chapter
5 importance level "3" and the chapter ID "004", and next
the chapter having the chapter importance level "1" and
the chapter ID "005". Lastly, the video camera 1
reproduces the chapter having the importance level 3
and the chapter ID "009" to thereafter terminate scene
10 reproducing. Namely, in the express reproducing mode",
only the chapters having the chapter importance level
"3" or smaller (only the chapters having the importance
levels "1" to "3") are reproduced. Therefore, as cue
skipping is performed during reproducing in the
15 "express reproducing mode", reproducing starts from the
start frame of the next chapter having the chapter
importance level "3" or smaller.

Furthermore, as a user starts reproducing by
selecting as the reproducing mode a "superexpress
20 reproducing mode", the video camera 1 reproduces first
the chapter having the chapter importance level "1" and
chapter ID "002", then the chapter having the chapter
importance level "1" and the chapter ID "005" to
thereafter terminate scene reproducing. Namely, in the
25 "super express reproducing mode", only the chapters
having the chapter importance level "1" are reproduced.

Therefore, the video camera 1 reproduces
always the chapter having the chapter importance level

"1" as any of the reproducing modes is selected, and each of other chapters is reproduced only when the reproducing mode is selected reproducing the chapter having the chapter importance level same as or smaller
5 than that set to each of other chapters.

By utilizing this function (hereinafter called a chapter select reproducing function), the superexpress reproducing mode is used for confirming roughly the contents of the object scene, and at the
10 stage when reproducing comes near the images whose contents are desired to be confirmed in detail, the reproducing mode is switched to the standard reproducing mode. In this manner, the contents of the object scene can be confirmed efficiently and
15 conveniently. The superexpress reproducing mode is very convenient for a user desiring to confirm the contents of a scene in short time.

Fig. 10 illustrates the process contents of the system controller 5 regarding the chapter select
20 reproducing function. The system controller 5 executes the chapter select reproducing process illustrated in Fig. 10 in accordance with a control program stored in the internal memory.

Namely, as a reproducing operation start
25 command is input after the "standard reproducing mode", "express reproducing mode" or "superexpress reproducing mode" is selected, the system controller 5 starts the chapter select reproducing process to first read the

chapter management information of the object scene from a corresponding hard disc drive 2 or DVD 3 (Step SP20).

Next, in accordance with the ID information contained in the chapter management information, the
5 system controller 5 selects the first chapter (e.g., the chapter having the smallest chapter ID) (Step SP21), and judges whether the chapter importance level of the chapter is a predetermined threshold value or smaller set to the present reproducing mode (Step
10 SP22). The threshold value is "5" if the "standard reproducing mode" is set, "3" if the "express reproducing mode" is set, and "1" if the "superexpress reproducing mode" is set.

If a judgment at Step SP22 is negated, the
15 flow advances to Step S24, whereas if the judgment is affirmed, the system controller 5 controls CODEC 10 to reproduce the chapter and display the reproduced image on the display (Step SP23).

Next, the system controller 5 refers to the
20 chapter management information to judge whether the chapter next to the chapter selected at Step SP21 exists (Step SP24). If this judgment is affirmed, the flow returns to Step SP21 to repeat similar processes by sequentially switching the chapter to be selected at
25 Step SP21 (Steps SP21 to SP24, to SP21).

As the processes at Steps SP21 to SP24 are completed for all chapters and the judgment at Step SP24 is negated, the system controller 5 terminates the

chapter select reproducing process.

Next, description will be made on an approach to making a user to easily confirm the chapter importance level set to each chapter in a scene.

5 Fig. 11 illustrates a chapter list screen 50 displayed on the display 6 by a user menu operation. For each chapter of an object scene, a thumbnail image 51 set to the chapter, and chapter management information 52 such as a lapse time from the scene start, a chapter importance level and the like, are
10 displayed on the chapter list screen 50.

More practically, when a display command for the chapter list screen 50 is input by operating the user interface 4, the system controller 5 controls a
15 corresponding hard disc drive controller 13 or DVD drive controller 14 to read from the hard disc drive 2 or DVD 3 the chapter management information 20 (Fig. 2) of the object scene, and the image information on the thumbnail image 51 of the start frame of each chapter
20 stored in correspondence with the object scene. Then, the system controller 5 operates to display the thumbnail image 51 of the start frame of each chapter on the chapter list screen 50 in accordance with the read image information, and display the management
25 information 52 of each chapter based on the chapter management information 20, on the chapter list screen 50, in correspondence with the thumbnail image 51.

In this manner, a user can know the chapter

having a high chapter importance level from the chapter list screen 50, and can find an important image quickly.

Next, description will be made on an approach
5 to making a user easily confirm a scene set with a chapter importance level.

Fig. 12 illustrates a scene list screen
displayed on the display by a user menu operation. A
thumbnail image 54 of each scene stored in the hard
10 disc drive 2 or DVD 3 is displayed on the scene list
screen 53.

More practically, when a display command for
the scene list screen 53 is input by operating the user
interface 4, the system controller 5 controls a
15 corresponding hard disc drive controller 13 or DVD
drive controller 14 to read from the hard disc drive 2
or DVD 3 the image information on the thumbnail image
54 of the start frame of every scene stored in the hard
disc drive 2 or DVD 3 designated by the user. Then,
20 the system controller 5 operates to display the
thumbnail image 54 of the start frame of each scene on
the scene list screen 53, in accordance with the read
image information.

In this case, the system controller 5 refers
25 to the chapter management information 20 (Fig. 2) of
each scene, and displays an icon 55 having a
predetermined shape on the thumbnail image 54 of the
scene set with the chapter importance level.

It is therefore possible for a user to judge from the icon 55 whether a chapter importance level is set to the scene, for example, to be reproduced. The contents of the scene displayed with the icon 55 can be confirmed efficiently by immediately performing a reproducing operation by the reproducing method using the chapter importance level as described above. For the scene not displayed with the icon, the chapter importance level setting process is executed before the reproduction operation so that the reproducing operation by the above-described reproducing method can be performed.

(1-5) Scene Dubbing Process

Next, description will be made on a process of dubbing encoded image information recorded in the hard disc drive 2 into DVD 3.

When the scene set with the chapter importance level is dubbed from the hard disc drive 2 into DVD 3 in the video camera 1, the system controller 5 copies not only the encoded image information and scene management information (chapter management information 20 (Fig. 2) and face recognizing management information 24 (Fig. 3) but also an image file of face images of faces registered in the face recognizing management information 24 contained in the scene management information, into DVD 3. Therefore, even if the encoded information in the hard disc drive 2 is erased, reproducing using a chapter importance level

and re-setting a chapter importance level can be performed immediately.

(1-6) Effects of the Embodiment

According to the video camera of the
5 embodiment described above, the chapter importance
level of each chapter can be set basing upon the
results of the face recognizing process executed during
photographing. It is therefore possible for a user to
quickly find a chapter on which an object person (VIP)
10 appears frequently. Further, a chapter having a
relevant chapter importance level is selectively
reproduced, among chapter importance levels of
respective chapters, so that a user can confirm the
whole contents of the scene easily and in short time
15 and can find an object scene quickly. In this manner,
user-friendliness of the video camera 1 can be improved
considerably.

(2) Second Embodiment

In Fig. 1, reference numeral 60 represents a
20 video camera of the second embodiment. The video
camera 60 of the second embodiment is configured like
the video camera 1 of the first embodiment, excepting
that the chapter importance level setting method is
different from that of the first embodiment.

25 Namely, in the first embodiment, a user
decides a VIP by using the VIP deciding screen 40 (Fig.
7) after photographing, and in accordance with the
decision, a chapter importance level of each chapter is

set. In contrast, in the second embodiment, the face recognizing process is executed only for a VIP decided by a user before photographing, and in accordance with the results of the face recognizing process, a chapter importance level of each chapter is set.

Fig. 13 illustrates the process contents of the system controller regarding a VIP setting process for a user to set a VIP before photographing, in the chapter importance setting method of the second embodiment. The system controller 61 executes the VIP setting process in accordance with a control program stored in the inner memory (not shown).

Namely, when a VIP setting mode is selected by operating the user interface 4, the system controller 61 starts the VIP setting process to first display a pre-photographing VIP setting screen 70 illustrated in Fig. 14 on the display 6 (Step SP30).

Next, the system controller 61 stands by until one of first and second VIP deciding method select buttons 71 and 72 displayed on the pre-photographing VIP setting screen 70 (Step SP31) is depressed. The first VIP deciding method select button 71 is a button corresponding to a mode of preparing for photographing a VIP, and the second VIP deciding method select button 72 is a button corresponding to a mode of deciding a VIP among persons recognized during photographing already performed, similar to the first embodiment.

As one of the first and second VIP deciding method select buttons 71 and 72 is depressed, the system controller 61 judges whether the depressed button is the first VIP deciding method select button
5 71 (Step SP32).

As this judgment is affirmed, the system controller 61 drives the image sensor 7, analog/digital converter 9 and CODEC 10 to display an image illustrated in Fig. 15 and photographed at that time by
10 a user, on the display 6 (Step SP34). In this case, the user photographs a VIP to be registered with the video camera 60.

Next, during photographing a VIP, the system controller 61 drives the face recognizing execution
15 unit 15 to execute the face recognizing process for the VIP under photographing (Step SP35). After completion of the face recognizing process, the system controller 61 makes the face recognizing execution unit 15 form the face recognizing management information 24 (Fig. 3)
20 based upon the face recognizing process results, and store this information in the hard disc drive 2 (Step SP38). Thereafter, the system controller 61 terminates the VIP setting process.

If the judgment at Step SP32 is negated
25 (i.e., if the second VIP deciding method select button 72 is depressed), the system controller 61 displays the VIP display screen 40 described with reference to Fig. 7 on the display 6 (Step SP36).

Next, the system controller 61 stands by until a VIP is selected from the VIP display screen 40 (Step SP37). As a VIP is selected, the face recognizing execution unit 15 is instructed to form the face recognizing management information 24 illustrated in Fig. 3 registering only information on the selected VIP (Step SP38). Thereafter, the system controller 61 terminates the VIP setting process.

With this arrangement, the system controller 61 controls the face recognizing execution unit 15 to reflect only the results of the face recognizing process for the VIP registered in the manner described above, upon the face recognizing management information 24 (Fig. 3), during photographing. Each time scene photographing is completed, the importance level setting process described with reference to Fig. 8 is executed to determine a chapter importance level of each chapter set in the scene, and in accordance with the determined chapter importance level, the chapter management information 20 (Fig. 2) is updated.

As described above, the video camera 60 of the embodiment executes the face recognizing process only for a VIP decided before moving image photographing, and in accordance with the results of the face recognizing process, a chapter importance level of each chapter is set. It is therefore possible to facilitate setting of the chapter importance level of each chapter. Further, since the video camera 60

registers a VIP in advance as described above, it is possible to avoid the following phenomenon. Namely, in performing autofocus and autoexposure utilizing face recognition, if the face of another person photographed together with a VIP is recognized by chance, the optimum focus and exposure are set to this other person, and the object VIP is not photographed well.

(3) Other Embodiments

In the first and second embodiments, the present invention is applied to the video camera 1, configured as illustrated in Fig. 1. The present invention is not limited thereto, but is also applicable to video cameras having various structures, apparatus other than video cameras such as DVD recorders, electronic still cameras and mobile phones provided with a moving image photographing function.

Further, in the first and second embodiments, although the hard disc drive 2 and DVD 3 are adopted as recording media for recording photographed images, the present invention is not limited thereto, but recording media other than the DVD and hard disc drive may also be adopted including a Blu-ray disc (BD), a compact disc (CD), a mini disc (MD), a semiconductor memory and the like.

Furthermore, in the first and second embodiments, although the hard disc drive 2 and a DVD drive as the recording/reproducing unit for recording and reproducing image information on photographed

scenes relative to recording media are built in the video camera 1, 60, the present invention is not limited thereto, but may adopt an external mount type drive connected by USB (Universal Serial Bus), eSATA
5 (External Serial Advanced Technology Attachment) and the like as the recording and reproducing unit.

Still further, in the first and second embodiments, although one system controller 5, 61 is constituted of: an importance level setting unit for
10 setting a chapter importance level of each chapter in accordance with the results of a face recognizing process for a VIP set by a user; a controller for controlling the hard disc drive 2 and DVD drive so as to selectively reproduce a chapter having a relevant
15 importance level, among importance levels of respective chapters; and a VIP setting unit for setting as a VIP a person corresponding to a face image selected by a user from a list of face images displayed on the display, the present invention is not limited thereto, but the
20 importance level setting unit, control unit and VIP setting unit may be structured discretely.

The present invention is widely applicable to various recording and reproducing apparatus such as DVD recorders in addition to video cameras.

25 The preferred embodiments of the present invention have been described above. According to the present invention, a particular chapter can be selectively reproduced in accordance with user settings

so that a user can find quickly a chapter on which a
desired person appears. Further, since a particular
chapter based on user settings can be selectively
reproduced, a user can know the whole contents of a
5 scene in short time and easily.

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
10 various changes and modifications may be made without
departing from the spirit of the invention and the
scope of the appended claims.

CLAIMS

1. A recording and reproducing apparatus for recording and reproducing image information, comprising:

a processor;

a display displaying a first option and a second option, wherein when the first option is selected, the recording and reproducing apparatus enters a record mode to capture video information, and when the second option is selected, the recording and reproducing apparatus enters a reproduction mode to reproduce and display recorded video information;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

capture a photograph and generate image information of the photograph;

record the image information in a recording medium;

execute a face-recognizing process on the image information to recognize a face;

reproduce the recorded image information from the recording medium;

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

selectively reproduce the recorded image information which includes the registered specific person; and

generate a thumbnail corresponding to the recorded image information in the recording medium such that the

thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface;

a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel;

a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium,

wherein the camera captures video information corresponding to a scene and the processor:

automatically sets a plurality of sections corresponding to the video information of the scene; and

generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails; and

wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying all of the background objects included in the contents of each image of the plurality of images.

2. A recording and reproducing apparatus for recording and reproducing image information, comprising:

- a display;
- a touch panel adhered to a screen of the display;
- a photographing sensor configured to photograph an object and generate image information;
- a recorder configured to record the image information generated by the photographing sensor in a recording medium;
- a reproducer configured to reproduce the image information recorded by the recorder;
- an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to image information generated by the photographing sensor into a digital image signal; and
- a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recording medium,

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face,

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium, and thereafter, the image information of the person with a face is used to register the person with a face as the specific person,

firstly pick out image information which includes the registered specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

3. The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in a reproducing mode set from one of a first reproducing mode and a second reproducing mode, and

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

4. The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode, and

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

5. The recording and reproducing apparatus according to claim 4, wherein the recording and reproducing apparatus is a mobile phone.

6. The recording and reproducing apparatus according to claim 2, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

7. The recording and reproducing apparatus according to claim 6, wherein the frame is a rectangular frame.

8. The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface.

9. The recording and reproducing apparatus according to claim 8, wherein the icon is displayed on the thumbnail.

10. The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to:

- capture video information corresponding to a scene;
- automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

11. The recording and reproducing apparatus according to claim 2, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

12. A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a processor;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

capture a photograph and generate image information of the photograph;

record the image information in a recording medium;

execute a face-recognizing process on the image information to recognize a face;

reproduce the recorded image information from the recording medium;

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a

photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; and

selectively reproduce the recorded image information which includes the registered specific person,

wherein the first setting mode and the second setting mode are selected using the touch panel, and

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information

13. The recording and reproducing apparatus according to claim 12, wherein the image information to be selectively reproduced is the image information having a relatively high importance level picked out among the image information recorded in the recording medium which includes the registered specific person.

14. The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and

other of the image information not reproduced under the first reproducing mode.

15. The recording and reproducing apparatus according to claim 14, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

16. The recording and reproducing apparatus according to claim 12, wherein the face-recognizing process is executed for a specific person that is set before photographing the specific person.

17. The recording and reproducing apparatus according to claim 12, wherein the recording and reproducing apparatus is a mobile phone.

18. The recording and reproducing apparatus according to claim 12, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

19. The recording and reproducing apparatus according to claim 18, wherein the frame is a rectangular frame.

20. The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to generate

a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel.

21. The recording and reproducing apparatus according to claim 20, wherein the icon is displayed on the thumbnail.

22. The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

capture video information corresponding to a scene;
automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene.

23. The recording and reproducing apparatus according to claim 22, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

24. The recording and reproducing apparatus according to claim 12, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

25. The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

26. The recording and reproducing apparatus according to claim 12, further comprising:

- an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

- a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium.

27. A mobile phone for recording and reproducing image information, comprising:

- a display;

- a touch panel adhered to a screen of the display;

- a photographing sensor configured to photograph an object and generate image information;

- a camera providing video information;

- a recorder configured to record the image information generated by the photographing sensor in a recording medium;

- a reproducer configured to reproduce the image information recorded by the recorder;

- processing circuitry configured to:

- execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face;

- register a person in the image information as a specific person, wherein an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information

of the person with a face is used to register the person with a face as the specific person;

firstly pick out an image information which includes the registered specific person,

secondly pick out an image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information, and

wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

28. The mobile phone according to claim 27, wherein the camera is further configured to capture video information corresponding to a scene and the processing circuitry is further configured to:

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

29. The mobile phone according to claim 27, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel and the icon is displayed on the thumbnail.

30. The mobile phone according to claim 27, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

ABSTRACT OF THE DISCLOSURE

In a recording and reproducing apparatus and a recording and reproducing method for the recording and reproducing apparatus for recording and reproducing image information on a scene obtained through photographing, relative to a predetermined first recording medium and being capable of setting one or more chapters to each scene, a face recognizing process is executed for a photographed image based on the image information, an importance level of each chapter is set in accordance with a result of the face recognizing process for a very important person (VIP) set by a user, and each chapter having a relevant importance level among importance levels of respective chapters is selectively reproduced. A user can therefore find an object chapter and scene quickly and easily.

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

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

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 / 478020 filed on September 5, 2014

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: Mari YOSHIDA

署名:

Signature:

Mari Yoshida

日付(任意):

Date (Optional):

Nov. 9, 2014

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

FIG. 1

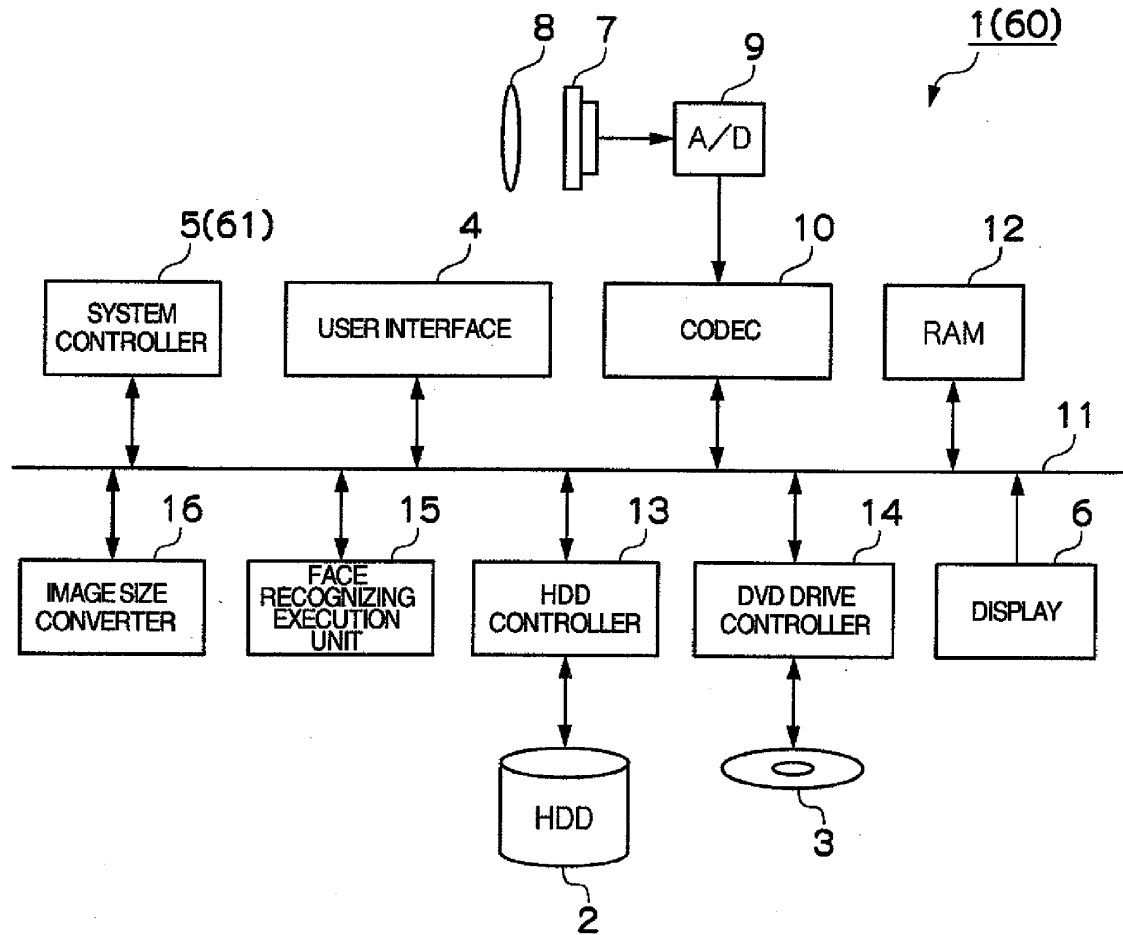


FIG. 2

21	22	23
001	hh:mm:ss:ff	2
002	hh:mm:ss:ff	1
003	hh:mm:ss:ff	3
⋮	⋮	⋮

20

FIG. 3

25	26	27
001	filepath/file. jpg	hh:mm:ss:ff ...
002	filepath/file. jpg	
003	filepath/file. jpg	hh:mm:ss:ff ...
⋮	⋮	

24

FIG. 4

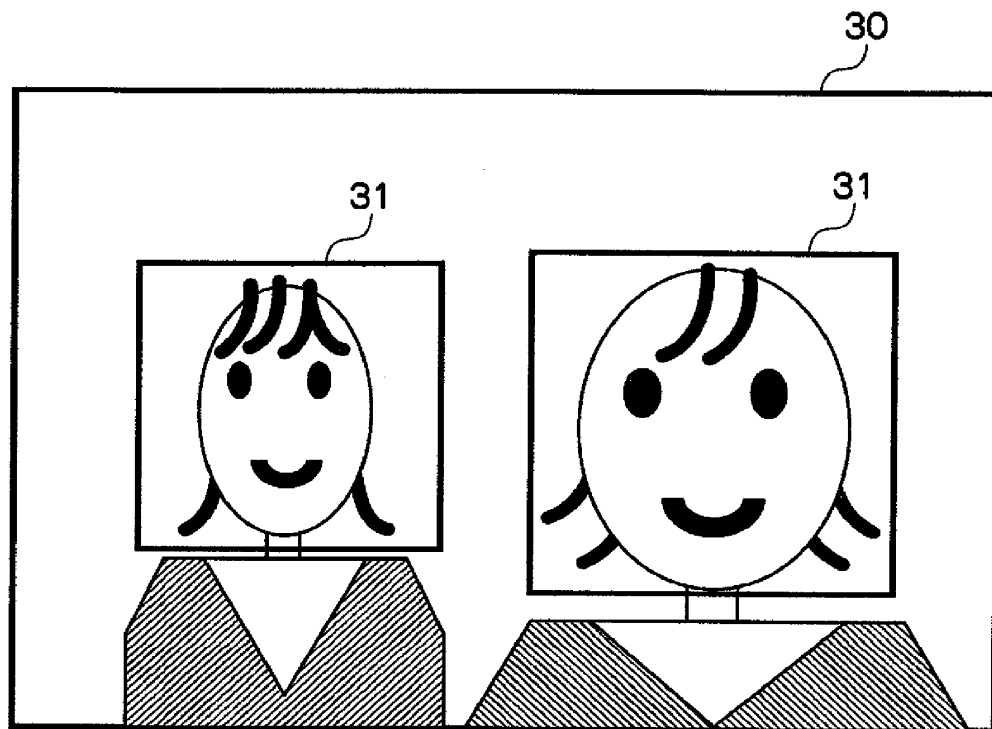


FIG. 5

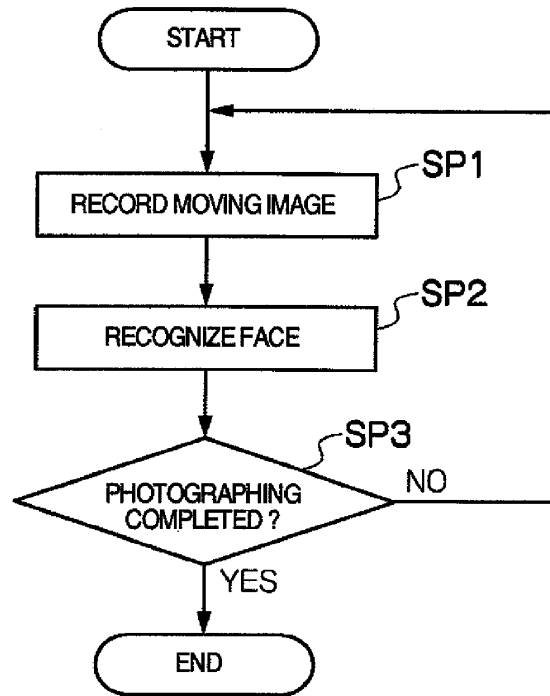


FIG. 6

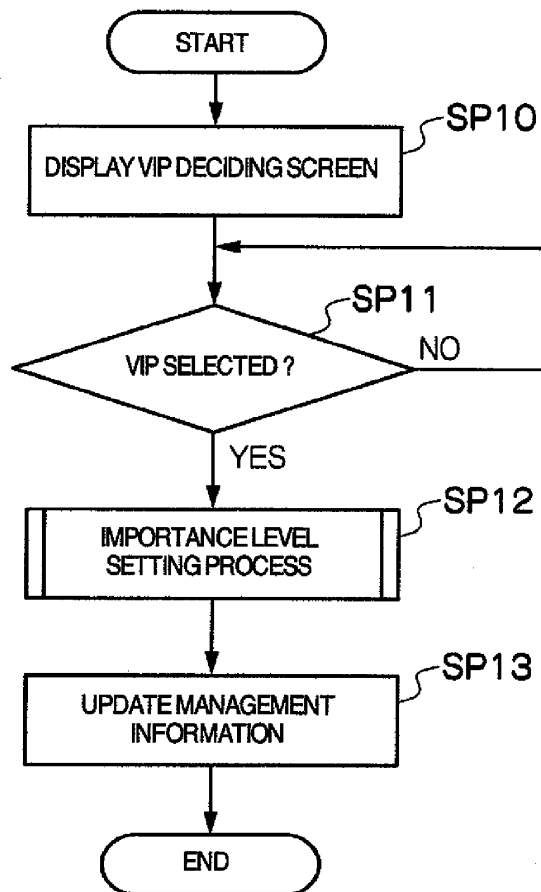


FIG. 7

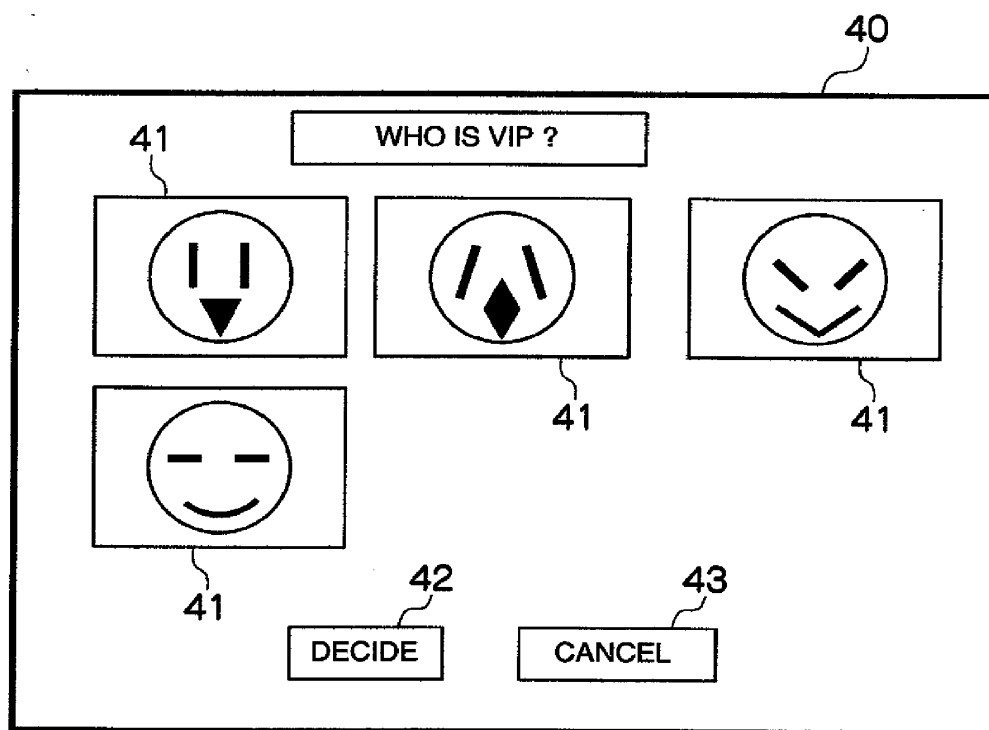


FIG. 8

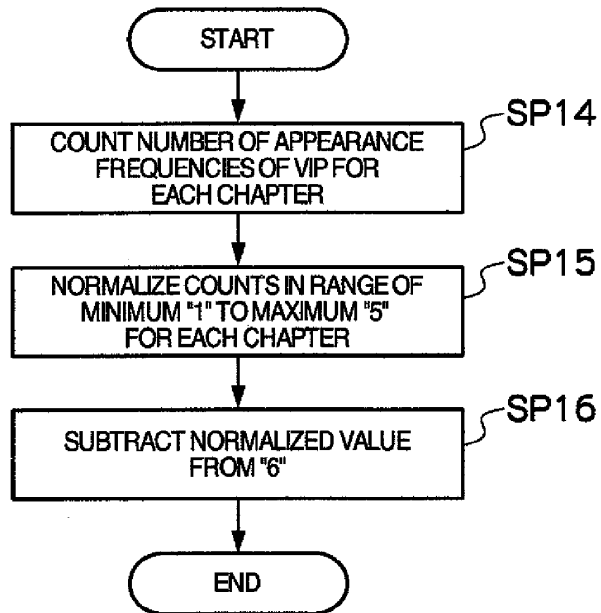


FIG. 9

CHAPTER ID	CHAPTER IMPORTANCE LEVEL
001	5
002	1
003	5
004	3
005	1
006	5
007	5
008	5
009	3

FIG. 10

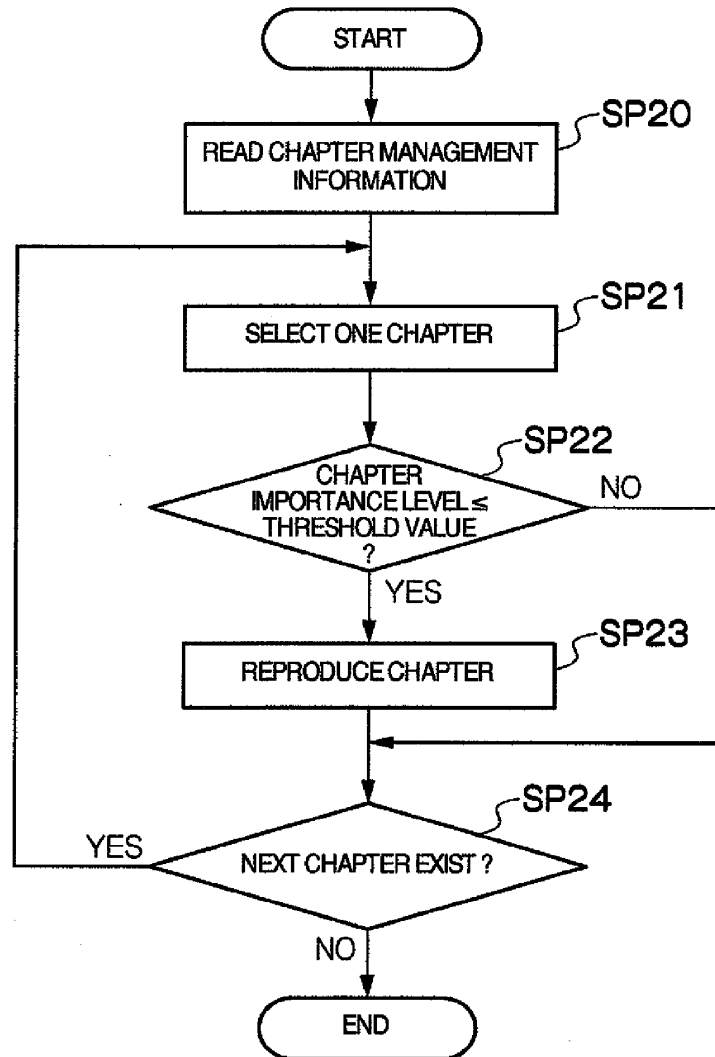


FIG. 11

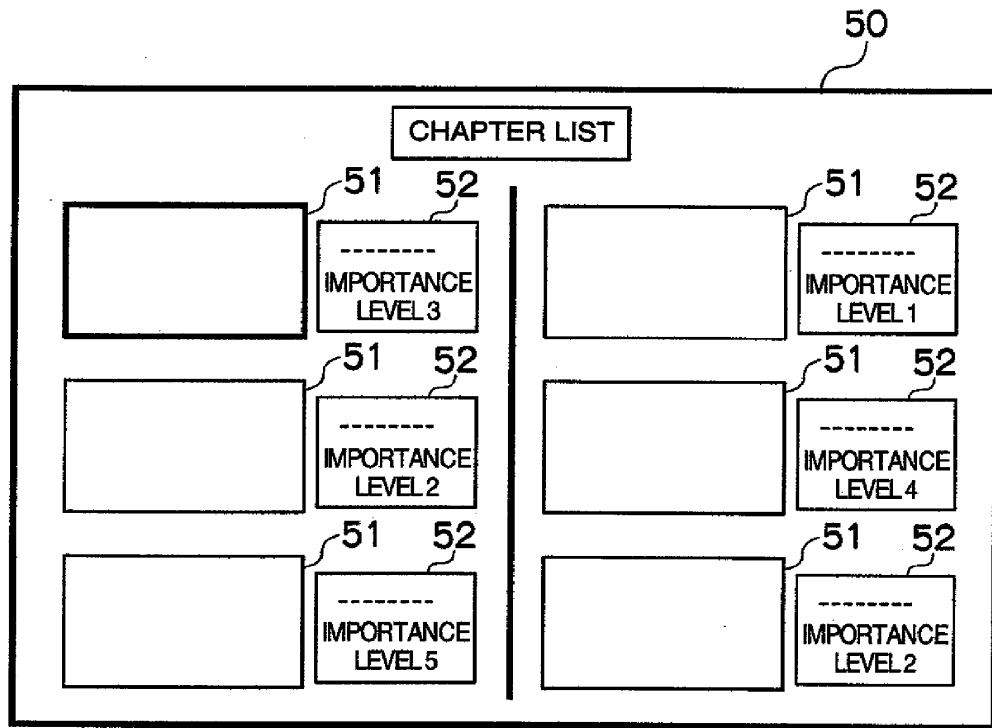


FIG. 12

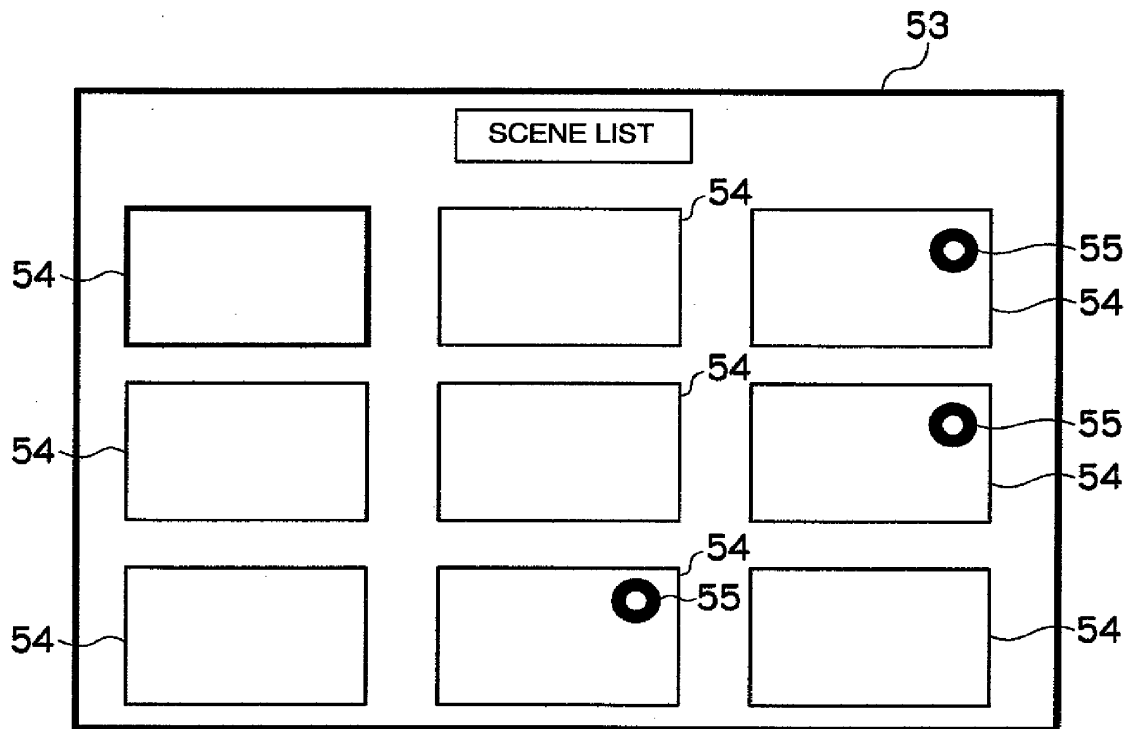


FIG. 13

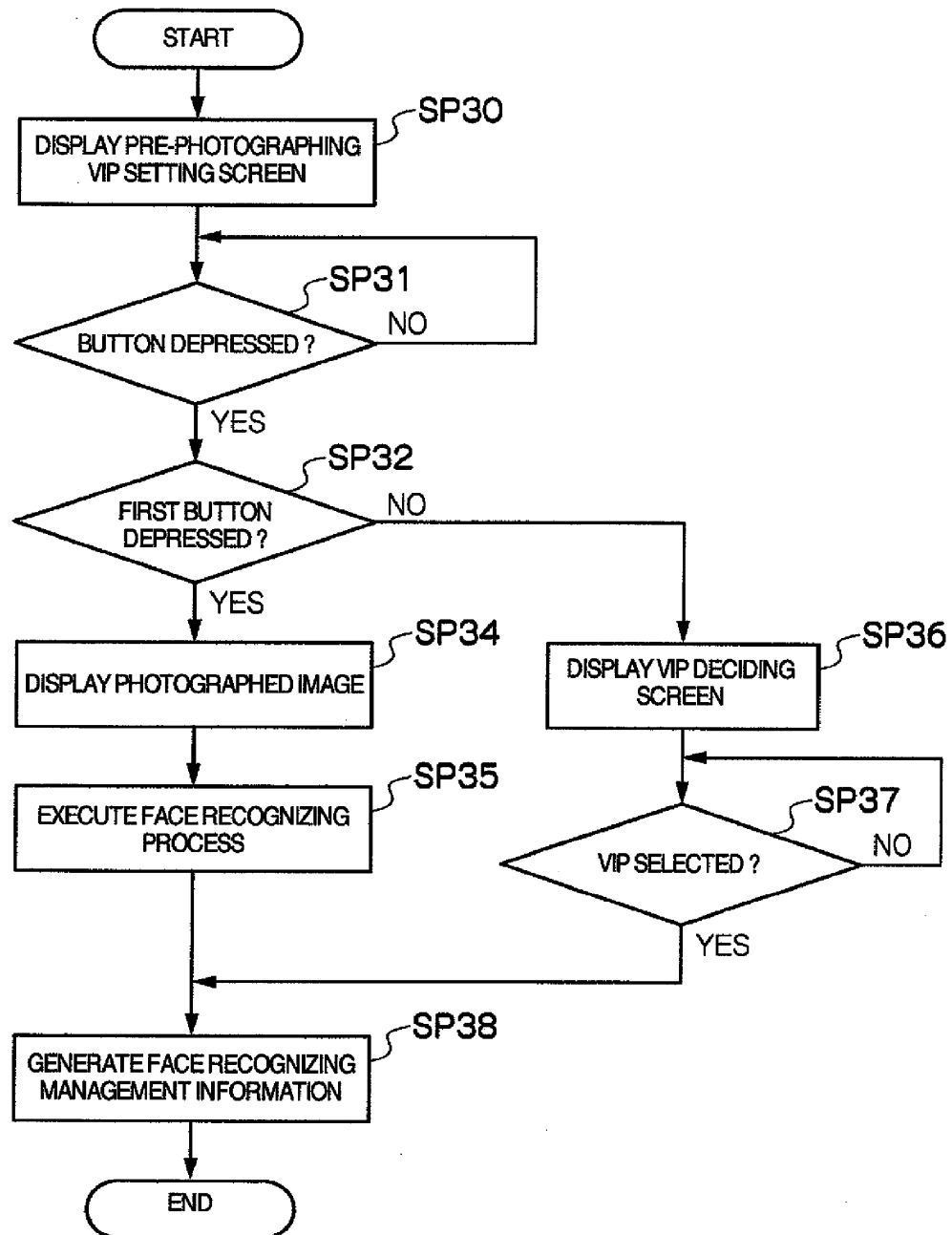


FIG. 14

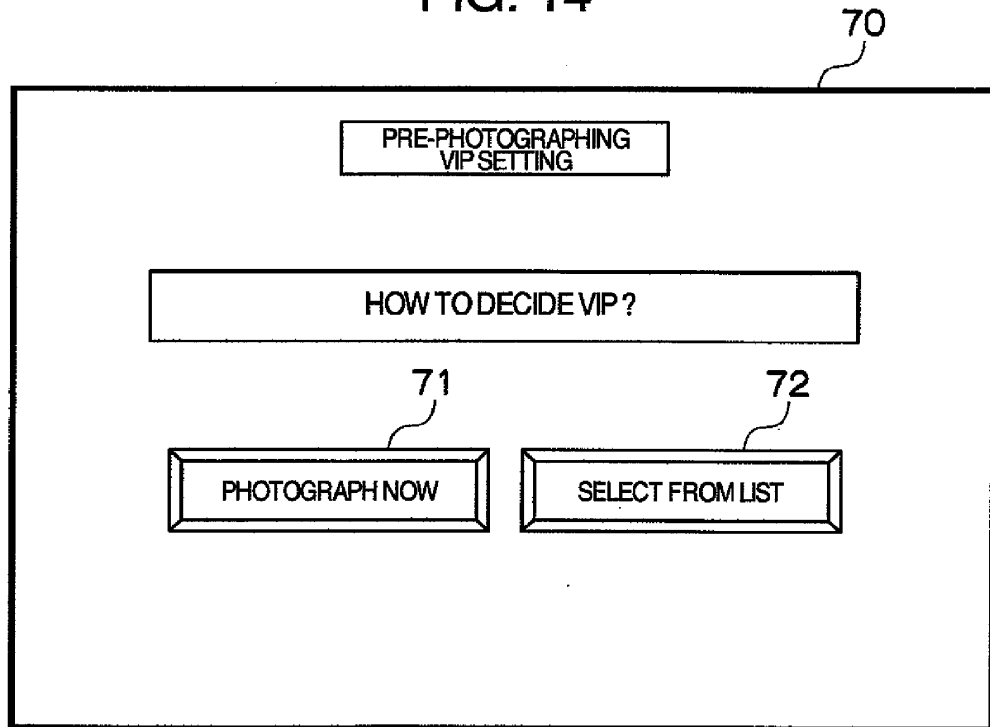
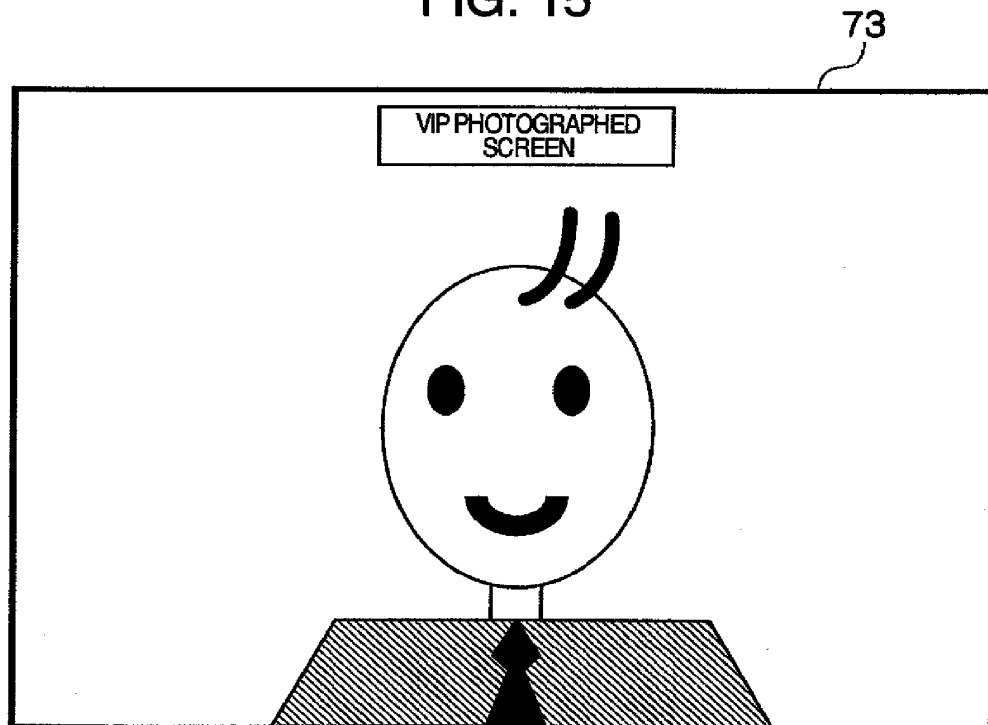


FIG. 15



Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
First Named Inventor/Applicant Name:		Mari YOSHIDA		
Filer:		John Roberts Mattingly/Krista Hargrove		
Attorney Docket Number:		ASA-9940-06		
Filed as Large Entity				
Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
REQUEST FOR PRIORITIZED EXAMINATION	1817	1	4200	4200
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	1202	10	100	1000
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous-Filing:				
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				7640

Electronic Acknowledgement Receipt	
EFS ID:	46987955
Application Number:	17983583
International Application Number:	
Confirmation Number:	8045
Title of Invention:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
First Named Inventor/Applicant Name:	Mari YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Krista Hargrove
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-9940-06
Receipt Date:	09-NOV-2022
Filing Date:	
Time Stamp:	12:18:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 7640
RAM confirmation Number	E2022A9C18540129
Deposit Account	501417
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	Track One Request	9940-06-Trac1-.pdf	113960	no	2
			3038a2f5b9665bb0af3fd51cc7456563fac98a9f		
Warnings:					
Information:					
2	Application Data Sheet	9940-06-ADS-.pdf	2196593	no	8
			81aea28fc05a52250ac7b0a64c0313f2b9bdf9c2		
Warnings:					
Information:					
3	Transmittal Letter	ASA-9940-06-IDS.pdf	16083	no	2
			f48de70318240069f4206746f86d02fb386514ec		
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	9940-06-SB08A-.pdf	1042931	no	24
			1156e27210f91aa8a5508127fa9c98bfc6d059ff		
Warnings:					
Information:					
5	Power of Attorney	9940-06-POA.pdf	1774971	no	4
			2b442e31d41c68c48f39bea6c9459d6cff2d0e5a		
Warnings:					
Information:					
6		ASA-9940-06-spec.pdf	2853451	yes	48
			7a5bceed16c937ecbb26445574e6f60d2dc395b3		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	

	Specification		1	35
	Claims		36	47
	Abstract		48	48
Warnings:				
Information:				
7	Oath or Declaration filed	ASA-9940-06-Dec.pdf	82080 aab5e0098fcc1c50a4f72e850a841a67eac6120f	no 2
Warnings:				
Information:				
8	Drawings-only black and white line drawings	ASA-9940-06-drawings.pdf	154560 6a36bbf2213b509aa9dd6f4927b37a031517039b	no 12
Warnings:				
Information:				
9	Fee Worksheet (SB06)	fee-info.pdf	55275 e7a893590c85698f8c64870406293e589c530e2d	no 2
Warnings:				
Information:				
Total Files Size (in bytes):			8289904	
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.				

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

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

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 / 478020 filed on September 5, 2014

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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: Mari YOSHIDA

署名:

Signature: Mari Yoshida

日付(任意):

Date (Optional): Nov. 9, 2014

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



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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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
17/983,583	11/09/2022		3300	ASA-9940-06	30	4

CONFIRMATION NO. 8045

FILING RECEIPT



0000000050909051

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

Date Mailed: 11/23/2022

Receipt is acknowledged of this non-provisional utility 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 FIRST INVENTOR, 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 corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction 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 provided that the request is grantable.

Inventor(s)

Mari YOSHIDA, Yokohama, JAPAN;

Applicant(s)

Maxell, Ltd., Kyoto, 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 17/397,040 08/09/2021
which is a CON of 15/898,351 02/16/2018 PAT 11,094,350
which is a CON of 14/478,020 09/05/2014 PAT 10,176,848
which is a CON of 12/430,185 04/27/2009 PAT 9,159,368

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 2008-130678 05/19/2008 No Access Code Provided

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.

If Required, Foreign Filing License Granted: 11/18/2022

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/983,583**

Projected Publication Date: 03/02/2023

Non-Publication Request: No

Early Publication Request: No
Title

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Preliminary Class

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.

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Title 37, Code of Federal Regulations, 5.11 & 5.15

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 17/983,583			
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	320		
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	700		
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	800		
TOTAL CLAIMS (37 CFR 1.16(j))	30	minus 20 = *	10			x 100 =	1000		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4	minus 3 = *	1			x 480 =	480		
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		
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0		
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	2300		
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			
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY	
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 NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045
24956 7590 01/19/2023 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER CENTRAL, DOCKET	
			ART UNIT 2484	PAPER NUMBER
			NOTIFICATION DATE 01/19/2023	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

<i>Decision Granting Request for Prioritized Examination (Track I)</i>	Application No. 17/983,583	Applicant(s) YOSHIDA, Mari	
	Examiner IRVIN DINGLE	Art Unit OPET	AIA (FITF) Status No
1. THE REQUEST FILED <u>09 November 2022</u> IS GRANTED . The above-identified application has met the requirements for prioritized examination A. ☒ for an original nonprovisional application (Track I). B. ☐ for an application undergoing continued examination (RCE). 2. The above-identified application will undergo prioritized examination. The application will be accorded special status throughout its entire course of prosecution until one of the following occurs: A. filing a <u>petition for extension of time</u> to extend the time period for filing a reply; B. filing an <u>amendment to amend the application to contain more than four independent claims, more than thirty total claims</u>, or a multiple dependent claim; C. filing a <u>request for continued examination</u> ; D. filing a notice of appeal; E. filing a request for suspension of action; F. mailing of a notice of allowance; G. mailing of a final Office action; H. completion of examination as defined in 37 CFR 41.102; or I. abandonment of the application. Telephone inquiries with regard to this decision should be directed to IRVIN DINGLE at (571)272-3210. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.			
/IRVIN DINGLE/ Lead Paralegal Specialist, OPET			

<i>Notice of References Cited</i>	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari	
	Examiner Mishawn N Hunter	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-20040109587-A1	06-2004	Segawa, Machiko	G06F16/58	707/E17.026
*	B	US-20080253662-A1	10-2008	Funaki; Isao	G06V40/16	382/209
*	C	US-20080247600-A1	10-2008	Date; Osamu	G11B27/329	707/E17.02
*	D	US-20090141949-A1	06-2009	Lee; Jong-ha	G06V40/172	382/118
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

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.

U.S. Patent and Trademark Office
PTO-892 (Rev. 01-2001)

Notice of References Cited

Part of Paper No. 20230211

Issue Classification 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

CPC						
Symbol					Type	Version
G11B	/	27	/	34	F	2013-01-01
G06F	/	16	/	745	I	2019-01-01
G11B	/	27	/	034	I	2013-01-01
G11B	/	27	/	105	I	2013-01-01
G11B	/	27	/	28	I	2013-01-01
H04N	/	5	/	77	I	2013-01-01
H04N	/	5	/	772	I	2013-01-01
H04N	/	5	/	781	I	2013-01-01
H04N	/	5	/	85	I	2013-01-01
H04N	/	9	/	8042	I	2013-01-01
G06V	/	20	/	40	I	2022-01-01
G06V	/	40	/	172	I	2022-01-01
G11B	/	27	/	30	I	2013-01-01
G06F	/	16	/	73	I	2019-01-01
G06F	/	18	/	00	I	2023-01-01
H04N	/	21	/	4347	A	2013-01-01
G11B	/	2220	/	455	A	2013-01-01

CPC Combination Sets						
Symbol			Type	Set	Ranking	Version
	/		/			

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	30	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	11 February 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20230211

Issue Classification 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G11B	/	27	/ 34
NON-CLAIMED			
/		/	

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	30	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	11 February 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20230211

Issue Classification 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47															
CLAIMS															
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1		10		19		28								
	2		11		20		29								
	3		12		21		30								
	4		13		22										
	5		14		23										
	6		15		24										
	7		16		25										
	8		17		26										
	9		18		27										

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 30	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484 (Primary Examiner) _____ (Date) 11 February 2023		O.G. Print Claim(s) 1	O.G. Print Figure 1

U.S. Patent and Trademark Office

Part of Paper No.: 20230211

<i>Index of Claims</i> 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

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

CLAIMS										
☒ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original									
	1									
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	30									

Search Notes 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

CPC - Searched*		
Symbol	Date	Examiner
H04N 5/77, 5/772, 5/781, 5/85,9/8042	2/11/2023	MH
G11B 27/34, 27/034, 27/105, 27/28, 27/30	2/11/2023	MH
G06F 16/745, 16/73, 18/00	2/11/2023	MH
G06V 40/172	2/11/2023	MH

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
performed PE2E search, see attached	2/11/2023	MH
performed CPC search (see above) further limited by text search using PE2E, see attached	2/11/2023	MH
performed NPL search using IP.com, see attached	2/11/2023	MH
performed interference search, see attached	2/11/2023	MH

	/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484
--	--

<i>Search Notes</i> 	Application/Control No. 17/983,583	Applicant(s)/Patent Under Reexamination YOSHIDA, Mari
	Examiner Mishawn N Hunter	Art Unit 2484

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04N	5/77, 5/772, 5/781, 5/85,9/8042	2/11/2023	MH
G11B	27/34, 27/034, 27/105, 27/28, 27/30	2/11/2023	MH
G06F	16/745, 16/73, 18/00	2/11/2023	MH
G06V	40/172	2/11/2023	MH

	/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484
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Main Concept Text

record reproduce video image register person mode camera auto focus exposure

(No Concept Modifiers)

(No Filters)

Options

De-dup: None
Relevance Cut-off: None
Sort: Relevance

Content: Patent Publications (169)

US Patents
US Designs
US Applications
EPO Patents
EPO Applications
China Patents
China Applications
Japan Patents
Japan Applications
Korea Patents
Korea Applications
WIPO Applications
Argentina Patents
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Australia Applications
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Kazakhstan Applications
Russia Patents
Russia Applications
Turkey Patents
Turkey Applications

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	19366	maxell.as.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:05 AM
L2	149	(yoshida WITH mari).in.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:05 AM
L3	0	(L1 L2) AND (record\$ AND reproduc\$ AND option AND face AND person).clm.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:06 AM
L4	9	(L1 L2) AND (record\$ AND reproduc\$ AND face AND person).clm.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:06 AM
L5	693768	hitachi.as.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:06 AM
L6	3	L5 AND (record\$ AND reproduc\$ AND face AND person).clm.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:06 AM
L7	85262	(g11b27/34 g06f16/745 g06f16/73 g06v40/172 g06v20/40 g06f18/00 g11b27/034 g11b27/105 g11b27/28 g11b27/30 h04n5/77 h04n5/772 h04n5/781 h04n5/85 h04n9/8042).cpc.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 10:08 AM
L8	139	("10169646" OR "20010031142" OR "20010043727" OR "20020015514" OR "20020105662" OR "20020114535" OR "20020168108" OR "20020172419" OR "20020175997" OR "20030025812" OR "20030048950" OR "20030052991" OR "20030059107" OR "20030059121" OR "20030084065" OR "20030107592" OR "20030210808" OR "20050105806" OR "20060044446" OR "20060188225" OR "20060204034" OR "20070019083" OR "20070036522" OR "20070098303" OR "20070162924" OR "20070171296" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/02/11 07:11 PM

02/11/2023 09:25:00 PM
Workspace: 17983583

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MH

		"20070171796" OR "20070237360" OR "20080019665" OR "20080131073" OR "20080144890" OR "20080199056" OR "20080218595" OR "20080225155" OR "20080232651" OR "20080240563" OR "20080256450" OR "20080279425" OR "20080309795" OR "20090002479" OR "20090006482" OR "20090016575" OR "20090034805" OR "20090037477" OR "20090059008" OR "20090135269" OR "20100014719" OR "20110055766" OR "4047187" OR "4317991" OR "4367027" OR "4638364" OR "5291234" OR "5488429" OR "5638136" OR "5710833" OR "5724456" OR "5781650" OR "5809202" OR "5812193" OR "5818975" OR "5835616" OR "5852823" OR "5870138" OR "5911139" OR "5978519" OR "5991456" OR "6072904" OR "6097470" OR "6101271" OR "6128397" OR "6148092" OR "6188777" OR "6192149" OR "6249315" OR "6263113" OR "6268939" OR "6282317" OR "6301370" OR "6332033" OR "6349373" OR "6351556" OR "6393148" OR "6404900" OR				
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L9	118	"6407777" OR "6421468" OR "6438264" OR "6456732" OR "6459436" OR "6473199" OR "6501857" OR "6502107" OR "6504942" OR "6504951" OR "6516154" OR "6526161" OR "6564225" OR "6567983" OR "6810149" OR "7474764" OR "7496211" OR "7522773" OR "7551755" OR "7555148" OR "7587068" OR "7634662" OR "7711241" OR "7760917" OR "7783085" OR "7787697" OR "7801910" OR "7835552" OR "7847815" OR "7853897" OR "7860854" OR "7881505" OR "7991714" OR "8024343" OR "8036430" OR "8103062" OR "8125509" OR "8185543" OR "8208764" OR "8243118" OR "8248489" OR "8285006" OR "8379108" OR "8384791" OR "8385607" OR "8396262" OR "8538252" OR "8548244" OR "8633960" OR "8781178" OR "8897508" OR "9639740" OR "9665597" OR "RE31370" OR "RE33682").pn. (record\$ reproduc\$ playback) AND (display\$3 WITH option	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:36 PM
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L10	28	WITH (record\$ near2 mode)) L7 AND L9	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:36 PM
L11	0	L9 AND (register\$3 WITH (person face facial) WITH mode)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:40 PM
L12	916	(record\$ reproduc\$ playback) AND (register\$3 WITH (person face facial) WITH mode)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:41 PM
L13	112	L7 AND L12	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:41 PM
L14	29	L12 AND (thumbnail WITH (person face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:42 PM
L15	2337	(record\$ reproduc\$ playback) AND (register\$3 WITH (person face facial) WITH specific)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:46 PM
L16	262	L7 AND L15	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:50 PM
L17	1469	(record\$ reproduc\$ playback) AND (register\$3 WITH ((specific known) near2 (person face facial)))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 07:54 PM
L18	24472	((person face facial) near3 recogniz\$) WITH image	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 08:17 PM
L19	4248	L18 AND ((person face facial) WITH register\$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 08:19 PM
L20	275	L19 AND (autofocus "auto focus" "auto exposure")	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 08:22 PM
L21	213	L20 AND camera AND (auto ADJ (focus exposure))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 09:01 PM
L22	51	L7 AND L21	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 09:01 PM
L23	8	L22 AND @ad<"20080519"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 09:15 PM
L24	12	L14 AND @ad<"20080519"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/02/11 09:17 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
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		(reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND select\$ AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND interface AND touch AND screen AND camera AND detect\$ AND frame AND portion AND conver\$ AND analog AND digital AND codec AND compress\$ AND encod\$ AND scene AND automatic\$ AND background AND object).clm.					08:55 PM
N2	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND detect\$ AND frame AND portion AND conver\$ AND analog AND digital AND codec AND compress\$ AND encod\$ AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:56 PM
N3	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND detect\$ AND frame AND portion AND conver\$ AND analog AND digital AND codec AND compress\$ AND encod\$ AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:56 PM

N4	0	facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND frame AND portion AND conver\$ AND analog AND digital AND codec AND compress\$ AND encod\$ AND scene AND automatic\$ AND background AND object).clm. (record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND frame AND encod\$ AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:56 PM
N5	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND encod\$ AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:56 PM
N6	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$	(USPAT)	OR	ON	ON	2023/02/11 08:56 PM

N7	0	AND option AND mode AND captur\$ AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND scene AND automatic\$ AND background AND object).clm. (record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND video AND memory AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:57 PM
N8	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND video AND captur\$ AND (face facial person) AND recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND scene AND automatic\$ AND background AND object).clm.	(USPAT)	OR	ON	ON	2023/02/11 08:57 PM
N9	0	(record\$ AND (reproduc\$ playback replay\$) AND (image photo photograph picture) AND display\$ AND option AND mode AND video AND captur\$ AND (face facial person) AND	(USPAT)	OR	ON	ON	2023/02/11 08:59 PM

		recogni\$ AND register\$ AND setting AND thumbnail AND shape AND importance AND camera AND scene AND automatic\$ AND background AND object AND (auto ADJ (focus exposure))).clm.					
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Bibliographic Data

Application No: 17/983,583

Foreign Priority claimed: ☒ Yes ☐ No

35 USC 119 (a-d) conditions met: ☒ Yes ☐ No ☐ Met After Allowance

Verified and Acknowledged: /MISHAWN N. HUNTER/

Examiner's Signature

Initials

Title:

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
11/09/2022	386	2484	ASA-9940-06
RULE			

APPLICANTS

Maxell, Ltd.,

INVENTORS

Mari YOSHIDA, Yokohama, JAPAN

CONTINUING DATA

This application is a CON of 17397040 08/09/2021

17397040 is a CON of 15898351 02/16/2018 PAT 11094350

15898351 is a CON of 14478020 09/05/2014 PAT 10176848

14478020 is a CON of 12430185 04/27/2009 PAT 9159368

FOREIGN APPLICATIONS

JAPAN JP2008-130678 05/19/2008

IF REQUIRED, FOREIGN LICENSE GRANTED**

11/18/2022

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	17/983,583
	Filing Date	2022-11-09
	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-06

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	7496211	B2	2009-02-24	Yamagami; Rui	
	2	7853897		2010-12-14	Ogawa et al.	Corr. to JP 2008017041
	3	7474764		2009-01-06	Segawa et al.	Corr. to JP 2006074463
	4	5809202		1998-09-15	Gotoh et al.	
	5	7496211		2009-02-24	Yamagami et al.	
	6	7634662		2009-12-15	Monroe, David A.	
	7	10169646	B2	2019-01-01	GANONG et al.	
	8	6810149	B1	2004-10-26	SQUILLA et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		
	Filing Date		2022-11-09
	First Named Inventor	YOSHIDA, M.	
	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

9	7522773	B2	2009-04-21	GALLAGHER et al.	
10	7587068	B1	2009-09-08	STEINBERG et al.	
11	7760917	B2	2010-07-20	VANHOUCKE et al.	
12	7783085	B2	2010-08-24	PERLMUTTER et al.	
13	7787697	B2	2010-08-31	RITZAU et al.	
14	7801910	B2	2010-09-21	HOUH et al.	
15	7835552	B2	2010-11-16	DOI	
16	7847815	B2	2010-12-07	PATEL et al.	
17	7860854	B2	2010-12-28	LIPSON et al.	
18	7881505	B2	2011-02-01	SCHNEIDERMAN et al.	
19	7991714	B2	2011-08-02	WIDROW et al.	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		17/983,583
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	First Named Inventor	YOSHIDA, M.	
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	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

20	8036430	B2	2011-10-11	TOKUSE	
21	8103062	B2	2012-01-24	ABE et al.	
22	8125509	B2	2012-02-28	KENOYER	
23	8185543	B1	2012-05-22	CHOUDHRY et al.	
24	8208764	B2	2012-06-26	GUCKENBERGER	
25	8243118	B2	2012-08-14	PACE et al.	
26	8248489	B2	2012-08-21	EJIMA et al.	
27	8285006	B2	2012-10-09	TANG et al.	
28	8379108	B2	2013-02-19	NOZAKI	
29	8384791	B2	2013-02-26	PORTER et al.	
30	8385607	B2	2013-02-26	OKADA	

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	Attorney Docket Number	ASA-9940-06	

31	8396262	B2	2013-03-12	AISAKA et al.	
32	8538252	B2	2013-09-17	NOZAKI et al.	
33	8548244	B2	2013-10-01	CONRADT et al.	
34	8633960	B2	2014-01-21	THORNE et al.	
35	8781178	B2	2014-07-15	NAGAOKA et al.	
36	8897508	B2	2014-11-25	ADAM et al.	
37	9639740	B2	2017-05-02	GANONG et al.	
38	RE33682	E	1991-09-03	HIRAMATSU	
39	RE31370	E	1983-09-06	MASHIMO et al.	
40	4047187	A	1977-09-06	MASHIMO et al.	
41	4317991	A	1982-03-02	STAUFFER	

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	First Named Inventor	YOSHIDA, M.	
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	Examiner Name		
	Attorney Docket Number		ASA-9940-06

	42	4367027	A	1983-01-04	STAUFFER	
	43	4638364	A	1987-01-20	HIRAMATSU	
	44	5291234	A	1994-03-01	SHINDO et al.	
	45	5488429	A	1996-01-30	KOJIMA et al.	
	46	5638136	A	1997-06-10	KOJIMA et al.	
	47	5710833	A	1998-01-20	MOGHADDAM	
	48	5724456	A	1998-03-03	BOYACK et al.	
	49	5781650	A	1998-07-14	LOBO et al.	
	50	5812193	A	1998-09-22	TOMITAKA et al.	
	51	5818975	A	1998-10-06	GOODWIN et al.	
	52	5835616	A	1998-11-10	LOBO et al.	

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	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

53	5852823	A	1998-12-22	DE BONET	
54	5870138	A	1999-02-09	SMITH et al.	
55	5911139	A	1999-06-08	JAIN et al.	
56	5978519	A	1999-11-02	BOLLMAN et al.	
57	5991456	A	1999-11-23	RAHMAN et al.	
58	6072904	A	2000-06-06	DESAI et al.	
59	6097470	A	2000-08-01	BUHR et al.	
60	6101271	A	2000-08-08	YAMASHITA et al.	
61	6128397	A	2000-10-03	BALUJA et al.	
62	6148092	A	2000-11-14	QIAN	
63	6188777	B1	2001-02-13	DARRELL et al.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.H./

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64	6192149	B1	2001-02-20	ESCHBACH et al.
65	6249315	B1	2001-06-19	HOLM
66	6263113	B1	2001-07-17	ABDEL-MOTTALEB et al.
67	6268939	B1	2001-07-31	KLASSEN et al.
68	6282317	B1	2001-08-28	LUO et al.
69	6301370	B1	2001-10-09	STEFFENS et al.
70	6332033	B1	2001-12-18	QIAN
71	6349373	B2	2002-02-19	SITKA et al.
72	6351556	B1	2002-02-26	LOUI et al.
73	6393148	B1	2002-05-21	BHASKAR
74	6404900	B1	2002-06-11	QIAN et al.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.H./

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	Attorney Docket Number		ASA-9940-06

75	6407777	B1	2002-06-18	DELUCA	
76	6421468	B1	2002-07-16	RATNAKAR et al.	
77	6438264	B1	2002-08-20	GALLAGHER et al.	
78	6456732	B1	2002-09-24	KIMBELL et al.	
79	6459436	B1	2002-10-01	KUMADA et al.	
80	6473199	B1	2002-10-29	GILMAN et al.	
81	6501857	B1	2002-12-31	GOTSMAN et al.	
82	6502107	B1	2002-12-31	NISHIDA	
83	6504942	B1	2003-01-07	HONG et al.	
84	6504951	B1	2003-02-04	LUO JIEBO et al.	
85	6516154	B1	2003-02-04	PARULSKI et al.	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.H./

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	Art Unit			
	Examiner Name			
	Attorney Docket Number		ASA-9940-06	

	86	6526161	B1	2003-02-25	YAN	
	87	6564225	B1	2003-05-13	BROGLIATTI et al.	
	88	6567983	B1	2003-05-20	SHIIMORI	
	89	7551755	B1	2009-06-23	STEINBERG et al.	
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	91	7711241	B2	2010-05-04	MORI et al.	
	92	8024343	B2	2011-09-20	GALLAGHER	
	93	9665597	B2	2017-05-30	HAITANI et al.	

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U.S.PATENT APPLICATION PUBLICATIONS

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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	20060188225	A1	2006-08-24	Yamakage; Tomoo	

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	Art Unit		
	Examiner Name		
	Attorney Docket Number	ASA-9940-06	

2	20080279425	A1	2008-11-13	Tang; Chi Sun Jackson	
3	20070019083	A1	2007-01-25	Nakashima; Teruyoshi	
4	20020175997		2002-11-28	Takata et al.	Corr. to JP 2003046911
5	20090135269		2009-05-28	Nozaki et al.	Corr. to JP 2007150603 & JP 2007150604
6	20080144890		2008-06-19	Ogawa	Corr. to JP 2007281680
7	20110055766		2011-03-03	Ogawa et al.	Corr. to JP 2012054948
8	20080225155		2008-09-18	Ebato et al.	Corr. to JP 2008228134
9	20090059008		2009-03-05	Ishii	Corr. to JP 2009059445
10	20080131073		2008-06-05	Ogawa et al.	Corr. to JP 2008017042
11	20070237360		2007-10-11	Irie et al.	Corr. To JP 2007281858
12	20070162924		2007-07-12	Radhakrishnan et al.	

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	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-06

	13	20070162924		2007-07-12	Radhakrishnan et al.	
	14	20080144890	A1	2008-06-19	Ogawa	
	15	20070036522	A1	2007-02-15	Yoshida et al.	
	16	20080019665		2008-01-24	Huang et al.	
	17	20090016575		2009-01-15	BAK et al.	
	18	20080256450		2008-10-16	Takakura et al.	
	19	20070019083		2007-01-25	Nakashima, Teruyoshi	
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	Attorney Docket Number		ASA-9940-06

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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)	2022-11-09
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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2484

DATE MAILED: 02/24/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045

TITLE OF INVENTION: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	05/24/2023

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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.

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24956 7590 02/24/2023
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ALEXANDRIA, VA 22314

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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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

(Typed or printed name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045

TITLE OF INVENTION: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	05/24/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
HUNTER, MISHAWN N	2484	386-230000

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/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

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

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)

☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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. _____



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045
24956 7590 02/24/2023 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER HUNTER, MISHAWN N	
			ART UNIT	PAPER NUMBER
			2484	
DATE MAILED: 02/24/2023				

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 30 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. 17/983,583	Applicant(s) YOSHIDA, Mari	
	Examiner Mishawn N Hunter	Art Unit 2484	AIA (FITF) 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 11/9/22.
☐ 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 1-30. 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. 14/478,020.
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 _____.	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. _____.	

	/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484
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DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Claim Objections

2. Claim 12 is objected to because of the following informalities: A period is need to at the end of claim 12. Appropriate correction is required.

Allowable Subject Matter

3. Claims 1-30 are allowed.
4. The following is an examiner's statement of reasons for allowance: The present invention is directed towards a recording and reproducing apparatus for recording and reproducing image information on a scene obtained through photographing. Claim 1 uniquely recites the distinct features, "register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to

register the person with a face as the specific person; selectively reproduce the recorded image information which includes the registered specific person; and generate a thumbnail corresponding to the recorded image information in the recording medium such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface; a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel; a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person; an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium, wherein the camera captures video information corresponding to a scene and the processor: automatically sets a plurality of sections corresponding to the video information of the scene; and generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails; and wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects

and displaying the plurality of images includes displaying the faces without displaying all of the background objects included in the contents of each image of the plurality of images.” Claim 2 uniquely recites the distinct features, “register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium, and thereafter, the image information of the person with a face is used to register the person with a face as the specific person, firstly pick out image information which includes the registered specific person, secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition, wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.” Claim 12 uniquely recites the distinct features, “register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with

a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; and selectively reproduce the recorded image information which includes the registered specific person, wherein the first setting mode and the second setting mode are selected using the touch panel, and wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.” Claim 27 uniquely recites the distinct features, “register a person in the image information as a specific person, wherein an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; firstly pick out an image information which includes the registered specific person, secondly pick out an image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition, wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for

the additional image information based on detection of the face in the additional image information, and wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.” The prior art does not render the above underlined obvious.

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.”

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mishawn N Hunter whose telephone number is (571)272-7635. The examiner can normally be reached Monday-Friday 7am-4pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran 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 published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is

available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MISHAWN N. HUNTER/
Primary Examiner, Art Unit 2484



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06

CONFIRMATION NO. 8045

PUBLICATION NOTICE



0C000000137496218

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

Title:RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Publication No.US-2023-0062925-A1

Publication Date:03/02/2023

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 publicly 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 Public Records Division. The Public Records Division 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, Public Records Division, 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 <https://portal.uspto.gov/pair/PublicPair>. 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

Electronic Acknowledgement Receipt	
EFS ID:	47625227
Application Number:	17983583
International Application Number:	
Confirmation Number:	8045
Title of Invention:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
First Named Inventor/Applicant Name:	Mari YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Mariah Smith
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-9940-06
Receipt Date:	03-MAR-2023
Filing Date:	09-NOV-2022
Time Stamp:	13:04:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no				
File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment after Notice of Allowance (Rule 312)	9940-06_312-Amendment_20230303.pdf	70621 a8d33deb02c816a9173972b346ff7ce0c8d f8b1	no	19
Warnings:					

Information:	
Total Files Size (in bytes):	70621
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. : 17/983,583 Confirmation No. : 8045
Inventor(s) : Mari YOSHIDA TC/GAU : 2484
Filed : November 9, 2022 Examiner : HUNTER, MISHAWN N
Title : RECORDING AND REPRODUCING APPARATUS AND METHOD
THEREOF
Docket No. : ASA-9940-06
Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop: Issue Fee
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: March 3, 2023

Sir:

In response to the Notice of Allowance mailed February 24, 2023, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks / Arguments are included following the amendments.

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Original) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a processor;

a display displaying a first option and a second option, wherein when the first option is selected, the recording and reproducing apparatus enters a record mode to capture video information, and when the second option is selected, the recording and reproducing apparatus enters a reproduction mode to reproduce and display recorded video information;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

capture a photograph and generate image information of the photograph;

record the image information in a recording medium;

execute a face-recognizing process on the image information to recognize a face;

reproduce the recorded image information from the recording medium;

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

selectively reproduce the recorded image information which includes the registered specific person; and

generate a thumbnail corresponding to the recorded image information in the recording medium such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface;

a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel;

a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium,

wherein the camera captures video information corresponding to a scene and the processor:

automatically sets a plurality of sections corresponding to the video information of the scene; and

generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails; and

wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying all of the background objects included in the contents of each image of the plurality of images.

2. (Original) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to image information generated by the photographing sensor into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recording medium,

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face,

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium, and thereafter, the image information of the person with a face is used to register the person with a face as the specific person,

firstly pick out image information which includes the registered specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

3. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in a reproducing mode set from one of a first reproducing mode and a second reproducing mode, and

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

4. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode, and

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

5. (Original) The recording and reproducing apparatus according to claim 4, wherein the recording and reproducing apparatus is a mobile phone.

6. (Original) The recording and reproducing apparatus according to claim 2, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

7. (Original) The recording and reproducing apparatus according to claim 6, wherein the frame is a rectangular frame.

8. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface.

9. (Original) The recording and reproducing apparatus according to claim 8, wherein the icon is displayed on the thumbnail.

10. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to:

capture video information corresponding to a scene;

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

11. (Original) The recording and reproducing apparatus according to claim 2, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

12. (Currently Amended) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a processor;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

- capture a photograph and generate image information of the photograph;
- record the image information in a recording medium;
- execute a face-recognizing process on the image information to recognize a face;
- reproduce the recorded image information from the recording medium;
- register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; and
- selectively reproduce the recorded image information which includes the registered specific person,

wherein the first setting mode and the second setting mode are selected using the touch panel, and

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

13. (Original) The recording and reproducing apparatus according to claim 12, wherein the image information to be selectively reproduced is the image information having a relatively high importance level picked out among the image information recorded in the recording medium which includes the registered specific person.

14. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information

reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

15. (Original) The recording and reproducing apparatus according to claim 14, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

16. (Original) The recording and reproducing apparatus according to claim 12, wherein the face-recognizing process is executed for a specific person that is set before photographing the specific person.

17. (Original) The recording and reproducing apparatus according to claim 12, wherein the recording and reproducing apparatus is a mobile phone.

18. (Original) The recording and reproducing apparatus according to claim 12, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

19. (Original) The recording and reproducing apparatus according to claim 18, wherein the frame is a rectangular frame.

20. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel.

21. (Original) The recording and reproducing apparatus according to claim 20, wherein the icon is displayed on the thumbnail.

22. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

capture video information corresponding to a scene;
automatically set a plurality of sections corresponding to the video information of the scene;
generate a plurality of thumbnails corresponding to the plurality of sections; and
display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene.

23. (Original) The recording and reproducing apparatus according to claim 22, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

24. (Original) The recording and reproducing apparatus according to claim 12, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

25. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

26. (Original) The recording and reproducing apparatus according to claim 12, further comprising:

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium.

27. (Original) A mobile phone for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a camera providing video information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face;

register a person in the image information as a specific person, wherein an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

firstly pick out an image information which includes the registered specific person,

secondly pick out an image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information, and

wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

28. (Original) The mobile phone according to claim 27, wherein the camera is further configured to capture video information corresponding to a scene and the processing circuitry is further configured to:

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

29. (Original) The mobile phone according to claim 27, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel and the icon is displayed on the thumbnail.

30. (Original) The mobile phone according to claim 27, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

Appl. No. 17/983,583
37 CFR §1.312 filed March 3, 2023
Reply to Notice of Allowance mailed February 24, 2023

ASA-9940-06

REMARKS

This paper is subsequent to the Notice of Allowance having a USPTO mailing date of February 24, 2023.

A period has been added at the end of claim 12 to overcome the claim objection set forth in the Notice of Allowability. Accordingly, consideration and entry of the amendment are respectfully requested.

Respectfully submitted,

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045
24956 7590 03/17/2023 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER HUNTER, MISHAWN N	
			ART UNIT 2484	PAPER NUMBER
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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

Response to Rule 312 Communication	Application No. 17/983,583	Applicant(s) YOSHIDA, Mari	
	Examiner Mishawn N Hunter	Art Unit 2484	AIA (FITF) Status No
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- 1. ☒ The amendment filed on <u>03 March 2023</u> under 37 CFR 1.312 has been considered, and has been: a) ☒ entered. b) ☐ entered as directed to matters of form not affecting the scope of the invention. c) ☐ disapproved because the amendment was filed after the payment of the issue fee. Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue. d) ☐ disapproved. See explanation below. e) ☐ entered in part. See explanation below. f) ☐ not entered because the supplemental or corrected Application Data sheet (ADS) ☐ was not accompanied by a petition to accept an unintentionally delayed claim under 37 CFR 1.55 or 27 CFR 1.78; ☐ did not identify the information being changed in accordance with 37 CFR 1.76(c)(2); ☐ was not properly signed in accordance with 37 CFR 1.76(e) (or 37 CFR 1.33(b) for applications filed prior to September 16, 2012). _____			
		/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	

OK TO ENTER: /M.H./

03/09/2023

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 17/983,583 Confirmation No. : 8045
Inventor(s) : Mari YOSHIDA TC/GAU : 2484
Filed : November 9, 2022 Examiner : HUNTER, MISHAWN N
Title : RECORDING AND REPRODUCING APPARATUS AND METHOD
THEREOF
Docket No. : ASA-9940-06
Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop: Issue Fee
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: March 3, 2023

Sir:

In response to the Notice of Allowance mailed February 24, 2023, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks / Arguments are included following the amendments.

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Original) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a processor;

a display displaying a first option and a second option, wherein when the first option is selected, the recording and reproducing apparatus enters a record mode to capture video information, and when the second option is selected, the recording and reproducing apparatus enters a reproduction mode to reproduce and display recorded video information;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

capture a photograph and generate image information of the photograph;

record the image information in a recording medium;

execute a face-recognizing process on the image information to recognize a face;

reproduce the recorded image information from the recording medium;

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

selectively reproduce the recorded image information which includes the registered specific person; and

generate a thumbnail corresponding to the recorded image information in the recording medium such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface;

a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel;

a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium,

wherein the camera captures video information corresponding to a scene and the processor:

automatically sets a plurality of sections corresponding to the video information of the scene; and

generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails; and

wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying all of the background objects included in the contents of each image of the plurality of images.

2. (Original) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to image information generated by the photographing sensor into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recording medium,

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face,

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium, and thereafter, the image information of the person with a face is used to register the person with a face as the specific person,

firstly pick out image information which includes the registered specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

3. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in a reproducing mode set from one of a first reproducing mode and a second reproducing mode, and

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

4. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode, and

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

5. (Original) The recording and reproducing apparatus according to claim 4, wherein the recording and reproducing apparatus is a mobile phone.

6. (Original) The recording and reproducing apparatus according to claim 2, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

7. (Original) The recording and reproducing apparatus according to claim 6, wherein the frame is a rectangular frame.

8. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface.

9. (Original) The recording and reproducing apparatus according to claim 8, wherein the icon is displayed on the thumbnail.

10. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to:

capture video information corresponding to a scene;

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

11. (Original) The recording and reproducing apparatus according to claim 2, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

12. (Currently Amended) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a processor;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

- capture a photograph and generate image information of the photograph;
- record the image information in a recording medium;
- execute a face-recognizing process on the image information to recognize a face;
- reproduce the recorded image information from the recording medium;
- register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; and
- selectively reproduce the recorded image information which includes the registered specific person,

wherein the first setting mode and the second setting mode are selected using the touch panel, and

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

13. (Original) The recording and reproducing apparatus according to claim 12, wherein the image information to be selectively reproduced is the image information having a relatively high importance level picked out among the image information recorded in the recording medium which includes the registered specific person.

14. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information

reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

15. (Original) The recording and reproducing apparatus according to claim 14, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

16. (Original) The recording and reproducing apparatus according to claim 12, wherein the face-recognizing process is executed for a specific person that is set before photographing the specific person.

17. (Original) The recording and reproducing apparatus according to claim 12, wherein the recording and reproducing apparatus is a mobile phone.

18. (Original) The recording and reproducing apparatus according to claim 12, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

19. (Original) The recording and reproducing apparatus according to claim 18, wherein the frame is a rectangular frame.

20. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel.

21. (Original) The recording and reproducing apparatus according to claim 20, wherein the icon is displayed on the thumbnail.

22. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

capture video information corresponding to a scene;
automatically set a plurality of sections corresponding to the video information of the scene;
generate a plurality of thumbnails corresponding to the plurality of sections; and
display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene.

23. (Original) The recording and reproducing apparatus according to claim 22, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

24. (Original) The recording and reproducing apparatus according to claim 12, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

25. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

26. (Original) The recording and reproducing apparatus according to claim 12, further comprising:

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recorded medium.

27. (Original) A mobile phone for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a camera providing video information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face;

register a person in the image information as a specific person, wherein an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

firstly pick out an image information which includes the registered specific person,

secondly pick out an image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information, and

wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

28. (Original) The mobile phone according to claim 27, wherein the camera is further configured to capture video information corresponding to a scene and the processing circuitry is further configured to:

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

29. (Original) The mobile phone according to claim 27, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel and the icon is displayed on the thumbnail.

30. (Original) The mobile phone according to claim 27, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

Appl. No. 17/983,583
37 CFR §1.312 filed March 3, 2023
Reply to Notice of Allowance mailed February 24, 2023

ASA-9940-06

REMARKS

This paper is subsequent to the Notice of Allowance having a USPTO mailing date of February 24, 2023.

A period has been added at the end of claim 12 to overcome the claim objection set forth in the Notice of Allowability. Accordingly, consideration and entry of the amendment are respectfully requested.

Respectfully submitted,

MATTINGLY & MALUR, PC

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

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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.

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24956 7590 02/24/2023
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

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	(Typed or printed name)
	(Signature)
	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045

TITLE OF INVENTION: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	05/24/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
HUNTER, MISHAWN N	2484	386-230000

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/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or 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
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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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

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

KYOTO, JAPAN

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4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

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

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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.

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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 _____ May 23, 2023

Typed or printed name _____ John R. Mattingly

Registration No. _____ 30293

Electronic Patent Application Fee Transmittal				
Application Number:		17983583		
Filing Date:		09-Nov-2022		
Title of Invention:		RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
First Named Inventor/Applicant Name:		Mari YOSHIDA		
Filer:		John Roberts Mattingly/Mariah Smith		
Attorney Docket Number:		ASA-9940-06		
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	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt	
EFS ID:	48046104
Application Number:	17983583
International Application Number:	
Confirmation Number:	8045
Title of Invention:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
First Named Inventor/Applicant Name:	Mari YOSHIDA
Customer Number:	24956
Filer:	John Roberts Mattingly/Mariah Smith
Filer Authorized By:	John Roberts Mattingly
Attorney Docket Number:	ASA-9940-06
Receipt Date:	23-MAY-2023
Filing Date:	09-NOV-2022
Time Stamp:	15:17:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E20235MF18268052
Deposit Account	501417
Authorized User	Mariah Smith
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	Amendment after Notice of Allowance (Rule 312)	9940-06_312-AMD_20230523.pdf	70962	no	19
			42bd99945695dc80238c767832bca25a66b99bad		
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	9940-06_IssueFee-payment_20230523.pdf	123099	no	1
			88b37e051de718a2eac9eb5b5ba25ccdc24cbabb		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37930	no	2
			47fc634ebac010a5e4202b0c02ae28ab789c420		
Warnings:					
Information:					
Total Files Size (in bytes):			231991		
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.					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 17/983,583 Confirmation No. : 8045
Inventor(s) : Mari YOSHIDA TC/GAU : 2484
Filed : November 9, 2022 Examiner : HUNTER, MISHAWN N
Title : RECORDING AND REPRODUCING APPARATUS AND METHOD
THEREOF
Docket No. : ASA-9940-06
Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop: Issue Fee
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: May 23, 2023

Sir:

In response to the Notice of Allowance mailed February 24, 2023, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks / Arguments are included following the amendments.

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (Currently Amended) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a processor;

a display displaying a first option and a second option, wherein when the first option is selected, the recording and reproducing apparatus enters a record mode to capture video information, and when the second option is selected, the recording and reproducing apparatus enters a reproduction mode to reproduce and display recorded video information;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

capture a photograph and generate image information of the photograph;

record the image information in a recording medium;

execute a face-recognizing process on the image information to recognize a face;

reproduce the recorded image information from the recording medium;

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

selectively reproduce the recorded image information which includes the registered specific person; and

generate a thumbnail corresponding to the recorded image information in the recording medium such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface;

a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel;

a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the ~~recorded~~ recording medium,

wherein the camera captures video information corresponding to a scene and the processor:

automatically sets a plurality of sections corresponding to the video information of the scene; and

generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails; and

wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying all of the background objects included in the contents of each image of the plurality of images.

2. (Original) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to image information generated by the photographing sensor into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the recording medium,

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face,

register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first

setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium, and thereafter, the image information of the person with a face is used to register the person with a face as the specific person,

firstly pick out image information which includes the registered specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

3. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in a reproducing mode set from one of a first reproducing mode and a second reproducing mode, and

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

4. (Original) The recording and reproducing apparatus according to claim 2,

wherein the processing circuitry is further configured to control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode, and

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

5. (Original) The recording and reproducing apparatus according to claim 4, wherein the recording and reproducing apparatus is a mobile phone.

6. (Original) The recording and reproducing apparatus according to claim 2, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

7. (Original) The recording and reproducing apparatus according to claim 6, wherein the frame is a rectangular frame.

8. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for the recorded image information via a user interface.

9. (Original) The recording and reproducing apparatus according to claim 8, wherein the icon is displayed on the thumbnail.

10. (Original) The recording and reproducing apparatus according to claim 2, wherein the processing circuitry is further configured to:

capture video information corresponding to a scene;

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

11. (Original) The recording and reproducing apparatus according to claim 2, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

12. (Previously Presented) A recording and reproducing apparatus for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a processor;

a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:

- capture a photograph and generate image information of the photograph;
- record the image information in a recording medium;
- execute a face-recognizing process on the image information to recognize a face;
- reproduce the recorded image information from the recording medium;
- register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person, and, when the second setting mode is selected, a person with a face in an image information of a person with a face is selected from a plurality of faces in the image information recorded in the recording medium and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person; and
- selectively reproduce the recorded image information which includes the registered specific person,

wherein the first setting mode and the second setting mode are selected using the touch panel, and

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information.

13. (Original) The recording and reproducing apparatus according to claim 12, wherein the image information to be selectively reproduced is the image information having a relatively high importance level picked out among the image information recorded in the recording medium which includes the registered specific person.

14. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,

wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time required for reproducing the image information under the second reproducing mode, and the image information reproduced under the second mode includes the image information

reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode.

15. (Original) The recording and reproducing apparatus according to claim 14, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,

wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.

16. (Original) The recording and reproducing apparatus according to claim 12, wherein the face-recognizing process is executed for a specific person that is set before photographing the specific person.

17. (Original) The recording and reproducing apparatus according to claim 12, wherein the recording and reproducing apparatus is a mobile phone.

18. (Original) The recording and reproducing apparatus according to claim 12, further comprising a camera providing video information, wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

19. (Original) The recording and reproducing apparatus according to claim 18, wherein the frame is a rectangular frame.

20. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel.

21. (Original) The recording and reproducing apparatus according to claim 20, wherein the icon is displayed on the thumbnail.

22. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:

capture video information corresponding to a scene;
automatically set a plurality of sections corresponding to the video information of the scene;
generate a plurality of thumbnails corresponding to the plurality of sections; and
display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene.

23. (Original) The recording and reproducing apparatus according to claim 22, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

24. (Original) The recording and reproducing apparatus according to claim 12, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

25. (Original) The recording and reproducing apparatus according to claim 12, wherein the memory further stores instructions that, when executed by the processor, cause the processor to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

26. (Currently Amended) The recording and reproducing apparatus according to claim 12, further comprising:

an analog/digital converter, wherein the analog/digital converter is configured to convert analog image data corresponding to the captured photograph into a digital image signal; and

a codec for compressing the digital image signal using a predetermined compression encoding method and generating encoded image information, wherein the encoded image information is stored in the ~~recorded~~ recording medium.

27. (Original) A mobile phone for recording and reproducing image information, comprising:

a display;

a touch panel adhered to a screen of the display;

a photographing sensor configured to photograph an object and generate image information;

a camera providing video information;

a recorder configured to record the image information generated by the photographing sensor in a recording medium;

a reproducer configured to reproduce the image information recorded by the recorder;

processing circuitry configured to:

execute a face-recognizing process on the image information generated by the photographing sensor to recognize a face;

register a person in the image information as a specific person, wherein an image information of a person with a face is obtained by newly photographing the person with a face in a photographing mode and, thereafter, the image information of the person with a face is used to register the person with a face as the specific person;

firstly pick out an image information which includes the registered specific person,

secondly pick out an image information based on a predetermined condition from among the picked-out image information which includes the registered specific person, the predetermined condition being set in accordance with an instruction by a user, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition,

wherein, when additional image information including a face is captured, autofocus and auto exposure are adjusted for the additional image information based on detection of the face in the additional image information, and

wherein, in response to the face-recognizing process detecting that a face of a person is included in the video information, the display displays the video information with a frame surrounding at least a portion of the face of the person.

28. (Original) The mobile phone according to claim 27, wherein the camera is further configured to capture video information corresponding to a scene and the processing circuitry is further configured to:

automatically set a plurality of sections corresponding to the video information of the scene;

generate a plurality of thumbnails corresponding to the plurality of sections; and

display the plurality of thumbnails, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, wherein displaying the plurality of thumbnails includes displaying timing information indicating a lapse time of a particular section within the captured video information of the scene.

29. (Original) The mobile phone according to claim 27, wherein the processing circuitry is further configured to generate a thumbnail corresponding to the recorded image information such that the thumbnail is displayed on the display with an icon having a predetermined shape when an importance level is set for an image included in the recorded image information, wherein the importance level is set via the touch panel and the icon is displayed on the thumbnail.

30. (Original) The mobile phone according to claim 27, wherein the display is configured to display at least a plurality of images recorded in the recording medium such that contents of each image in the plurality of images include a face of a different person and background objects and displaying the plurality of images includes displaying the faces without displaying the background objects included in the contents of each image of the plurality of images.

Appl. No. 17/983,583
37 CFR §1.312 filed May 23, 2023
Reply to Notice of Allowance mailed February 24, 2023

ASA-9940-06

REMARKS

This paper is subsequent to the Notice of Allowance having a USPTO mailing date of February 24, 2023. Claims 1 and 26 are amended.

The foregoing minor amendments are believed to be necessary to improve the clarity of the allowed claims. Accordingly, consideration and entry of the amendments is respectfully requested. Applicant believes that these minor amendments do not affect the allowability of the claims.

Respectfully submitted,

MATTINGLY & MALUR, PC

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



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045
24956 7590 06/26/2023 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER HUNTER, MISHAWN N	
			ART UNIT 2484	PAPER NUMBER
			NOTIFICATION DATE 06/26/2023	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

Response to Rule 312 Communication	Application No. 17/983,583	Applicant(s) YOSHIDA, Mari	
	Examiner Mishawn N Hunter	Art Unit 2484	AIA (FITF) Status No
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address -- 1. ☒ The amendment filed on <u>23 May 2023</u> under 37 CFR 1.312 has been considered, and has been: a) ☒ entered. b) ☐ entered as directed to matters of form not affecting the scope of the invention. c) ☐ disapproved because the amendment was filed after the payment of the issue fee. Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue. d) ☐ disapproved. See explanation below. e) ☐ entered in part. See explanation below. f) ☐ not entered because the supplemental or corrected Application Data sheet (ADS) ☐ was not accompanied by a petition to accept an unintentionally delayed claim under 37 CFR 1.55 or 27 CFR 1.78; ☐ did not identify the information being changed in accordance with 37 CFR 1.76(c)(2); ☐ was not properly signed in accordance with 37 CFR 1.76(e) (or 37 CFR 1.33(b) for applications filed prior to September 16, 2012). _____			
		/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	

OK TO ENTER: /M.H./
06/20/2023

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 17/983,583 Confirmation No. : 8045
Inventor(s) : Mari YOSHIDA TC/GAU : 2484
Filed : November 9, 2022 Examiner : HUNTER, MISHAWN N
Title : RECORDING AND REPRODUCING APPARATUS AND METHOD
THEREOF
Docket No. : ASA-9940-06
Customer No.: 24956

AMENDMENT UNDER 37 CFR §1.312

Mail Stop: Issue Fee
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Date: May 23, 2023

Sir:

In response to the Notice of Allowance mailed February 24, 2023, the following amendments and remarks are respectfully submitted in connection with the above-identified application.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks / Arguments are included following the amendments.



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	08/15/2023	11727960	ASA-9940-06	8045

24956 7590 07/26/2023

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

ISSUE NOTIFICATION

The projected patent number and issue date are specified above. The patent will issue electronically. The electronically issued patent is the official patent grant pursuant to 35 U.S.C. § 153. The patent may be accessed on or after the issue date through Patent Center at <https://patentcenter.uspto.gov/>. The patent will be available in both the public and the private sides of Patent Center. Further assistance in electronically accessing the patent, or about Patent Center, is available by calling the Patent Electronic Business Center at 1-888-217-9197.

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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 Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/983,583	11/09/2022	Mari YOSHIDA	ASA-9940-06	8045
24956 7590 08/15/2023 MATTINGLY & MALUR, PC 1800 DIAGONAL ROAD SUITE 210 ALEXANDRIA, VA 22314			EXAMINER HUNTER, MISHAWN N	
			ART UNIT 2484	PAPER NUMBER
			NOTIFICATION DATE 08/15/2023	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



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APPLICATION NO.	ISSUE DATE	PATENT NO.
17/983,583	15-Aug-2023	11727960

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EGRANT NOTIFICATION

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