Doc Code: PA..
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PTO/AIA/82A (07-13)
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NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	
Filing Date	August 9, 2021
First Named Inventor	M. YOSHIDA
Title	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
Art Unit	
Examiner Name	
Attorney Docket Number	ASA-9940-05

SIGNATURE of Applicant or Patent Practitioner

Signature	/John R. Mattingly/	Date (Optional)	August 9, 2021
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.

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

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

出願番号 Application Number	出願日 Filing Date

(注記：PTO/AIA82Aに同じ情報が明記されている場合、上の枠内は空欄でも可)
(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ 私は、下記顧客番号に関連する特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。
I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 24956

又は
OR

☐ 私は、添付のリスト(PTO/AIA/82C)に記載の特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。（注記：PTO/AIA/82Cを記入すること。）
I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

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☑ 上記顧客番号に付随する住所
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事務所または個人名 Firm or Individual Name					
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市 City		州 State		郵便番号 Zip	
国 Country					
電話番号 Telephone		メールアドレス Email			

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

私は出願人であり（出願人が法人の場合、出願人名を下記枠内に記入）：
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Maxell, Ltd.

☐ 発明者もしくは共同発明者である（下記役職の明記は不要）
Inventor or Joint Inventor (title not required below)

☐ 死亡したもしくは成年被後見人である発明者の法定代理人である（下記役職の明記は不要）
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ 被譲渡人もしくは発明者が譲渡する義務を負う人物である
Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ 上記以外で、十分な独占的所有権を示す人物である（例：37 CFR 1.46(b)(2)に基づく申請が本出願において認められた、又は本書類と共にその申請がなされている場合）（出願人が法人の場合、署名者の役職を明記すること）
Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

特許出願人の署名
SIGNATURE of Applicant for Patent

下記署名者（役職は下記に記載）は出願人の代理人と認められている（出願人が法人の場合等）
The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

署名 Signature	Kazuhiro Kaizaki	署名日（任意） Date (Optional)	Oct. 17. 2017
氏名 Name	Kazuhiro Kaizaki		
役職 Title	Vice President		

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

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3. 本記録システムの記録は、同記録に関連する個人から、同記録についての支援を依頼され、当該個人に関連した要求を行う米国会議員に対し、通常使用の範囲として開示される場合がある。
4. 本記録システムの記録は、契約を履行するために同記録を必要とする本庁の契約業者に対し、通常使用の範囲として開示される場合があります。情報を受け取る側は、5. U.S.C. 552a(m)に基づき、1974年プライバシー法修正法の規定要件を遵守しなければなりません。
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7. 本記録システムの記録は、通常使用の範囲として、44 U.S.C 2904および2906に基づき、記録管理方法およびプログラムに対する改善を提案するという米一般調達局長官(GSA)の職務の一部として実施される記録監査において、GSAまたはその委任による代理人に対し開示される場合があります。この開示は、上記目的による記録監査を規定するGSA法規およびその他関連する(GSAまたは商務省)指令に従って行われます。この開示は、個人を特定する目的に使用されてはなりません。
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9. 本記録システムの記録は、法律に違反している、もしくは違反する可能性があると米国特許商標庁により判断された場合、通常使用の範囲として、連邦、州、または地方自治体の警察等に開示される場合があります。

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s)	:	M. YOSHIDA
		Confirmation No.: TBD
Serial No.	:	To be assigned
Filed	:	August 9, 2021
For	:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
Group	:	To be assigned
Examiner	:	To be assigned
Docket No.	:	ASA-9940-05
Customer No.:		24956

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

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

August 9, 2021

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. 15/898,351, filed February 16, 2018, 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

Maxell, Ltd.
Ex. 2036
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	
	Filing Date	2021-08-09
	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

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 a;/	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.	

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	Filing Date	2021-08-09
	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

	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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	Attorney Docket Number	ASA-9940-05

	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-9940-05

	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.	
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	41	4317991	A	1982-03-02	STAUFFER	

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	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

	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.	
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	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-9940-05

	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.	
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	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

	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.	
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	71	6349373	B2	2002-02-19	SITKA et al.	
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	73	6393148	B1	2002-05-21	BHASKAR	
	74	6404900	B1	2002-06-11	QIAN et al.	

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	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

	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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	First Named Inventor	YOSHIDA, M.
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	Examiner Name	
	Attorney Docket Number	ASA-9940-05

	86	6526161	B1	2003-02-25	YAN	
	87	6564225	B1	2003-05-13	BROGLIATTI et al.	
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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).

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☐ 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).

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

☒ A certification statement is not submitted herewith.

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Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2021-08-09
Name/Print	John R. Mattingly	Registration Number	30,293

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RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

INCORPORATION BY REFERENCE

This application is a continuation of Application Serial No. 15/898,351, filed February 16, 2018, 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. 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.

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.

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.

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 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 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 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 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 type of button manipulation during photographing, and reproducing a frame having a higher priority order.

SUMMARY OF THE INVENTION

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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 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 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 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 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 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

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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, 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 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 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 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 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

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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 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 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 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 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 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

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and easily.

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

BRIEF DESCRIPTION OF THE DRAWINGS

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

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.

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.

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.

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.

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 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-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

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

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 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 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 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 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.

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 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 (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) 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 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 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 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 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 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 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.

(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 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.

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.

(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 "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.

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 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 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 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 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).

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).

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 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 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 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 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 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 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.

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 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

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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 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 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 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 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 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, 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 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 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 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 "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

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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 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 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 "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 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 "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 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 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 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 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 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 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 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 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 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 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.

Fig. 11 illustrates a chapter list screen 50 displayed on the display6 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 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 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 stored in correspondence with the object scene. Then, the system controller 5 operates to display the thumbnail image 51of the start frame of each chapter on the chapter list screen 50 in accordance with the read image information, and display the management 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 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 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 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, 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 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 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) 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 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 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.

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 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 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 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) 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 (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).

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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, 60 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 (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 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 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 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 ad DVD recorders in addition to video cameras.

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

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

a photographing device for photographing an object and for generating image information;

a recording device for recording the image information having been generated by the photographing device into a recording medium;

a face-recognition processor for executing a face recognizing process for the image information;

a reproducing device for reproducing the image information having been recorded by the recording device from the recording medium;

a display; and

a controller;

wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium, and to register a person whose face has been recognized by the face recognizing process as a first person; and

wherein the controller is operable under a first controlling mode, in an event that the image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium, the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person.

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もとの発明者、あるいはもと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

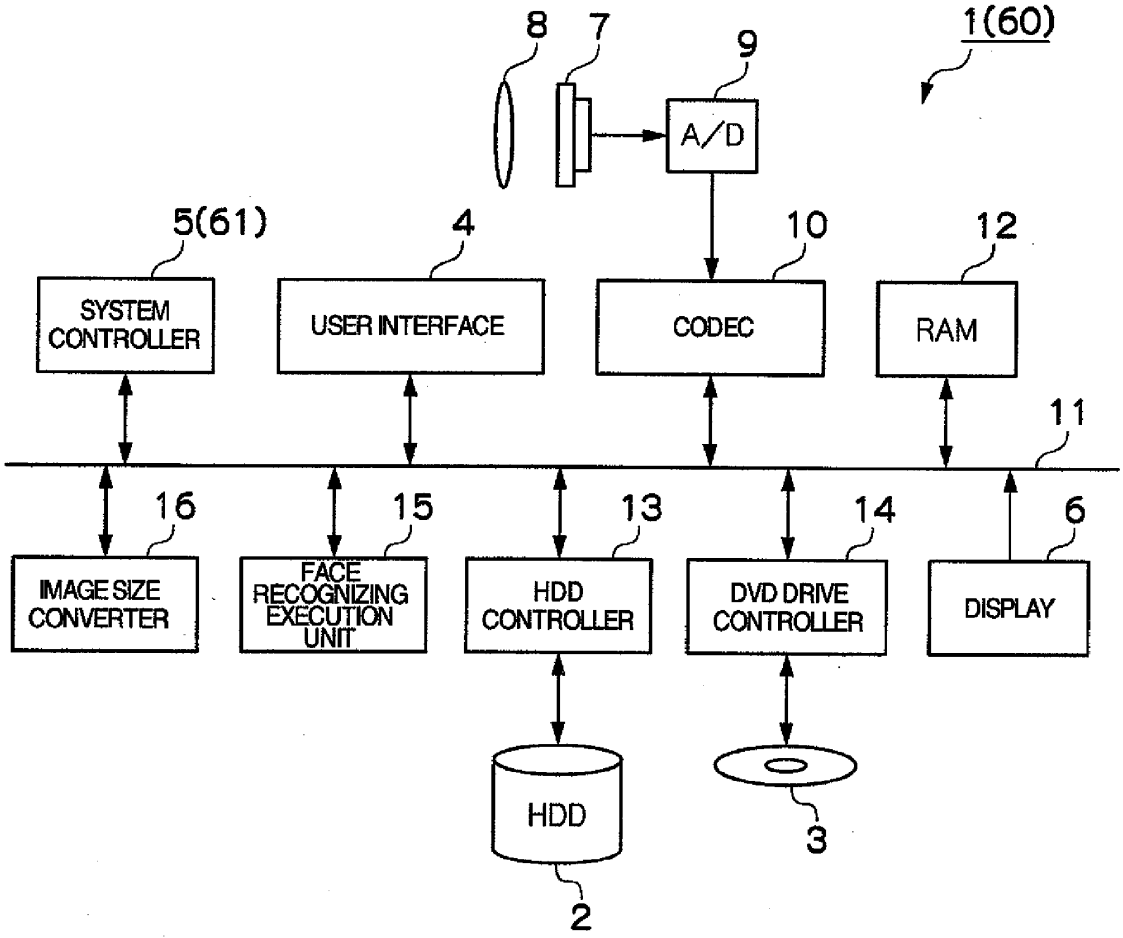

8
7
9
1(60)
A/D
5(61)
4
10
12
SYSTEM CONTROLLER
USER INTERFACE
CODEC
RAM
11
16
15
13
14
6
IMAGE SIZE CONVERTER
FACE RECOGNIZING EXECUTION UNIT
HDD CONTROLLER
DVD DRIVE CONTROLLER
DISPLAY
HDD
3
2

FIG. 2

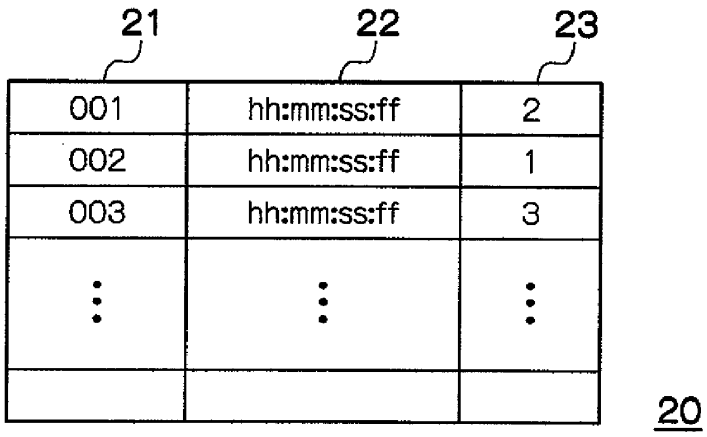

21
22
23
001
hh:mm:ss:ff
2
002
hh:mm:ss:ff
1
003
hh:mm:ss:ff
3
20

FIG. 3

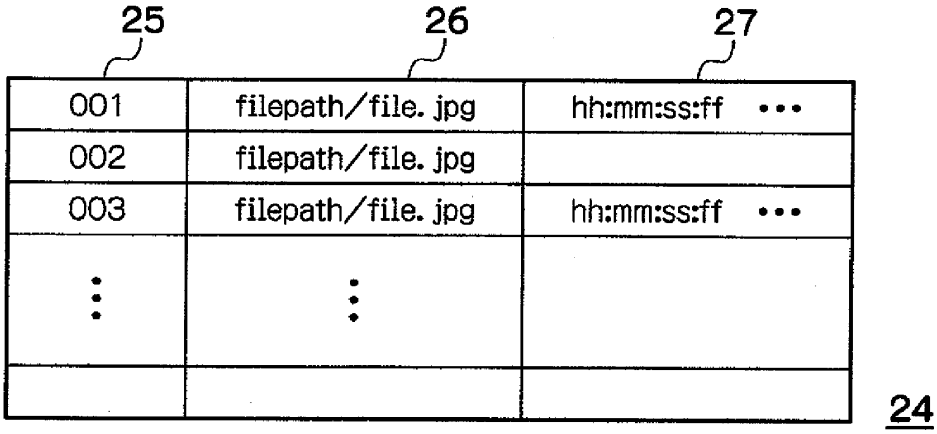

25
26
27
001
filepath/file. jpg
hh:mm:ss:ff •••
002
filepath/file. jpg
003
filepath/file. jpg
hh:mm:ss:ff •••
24

FIG. 4

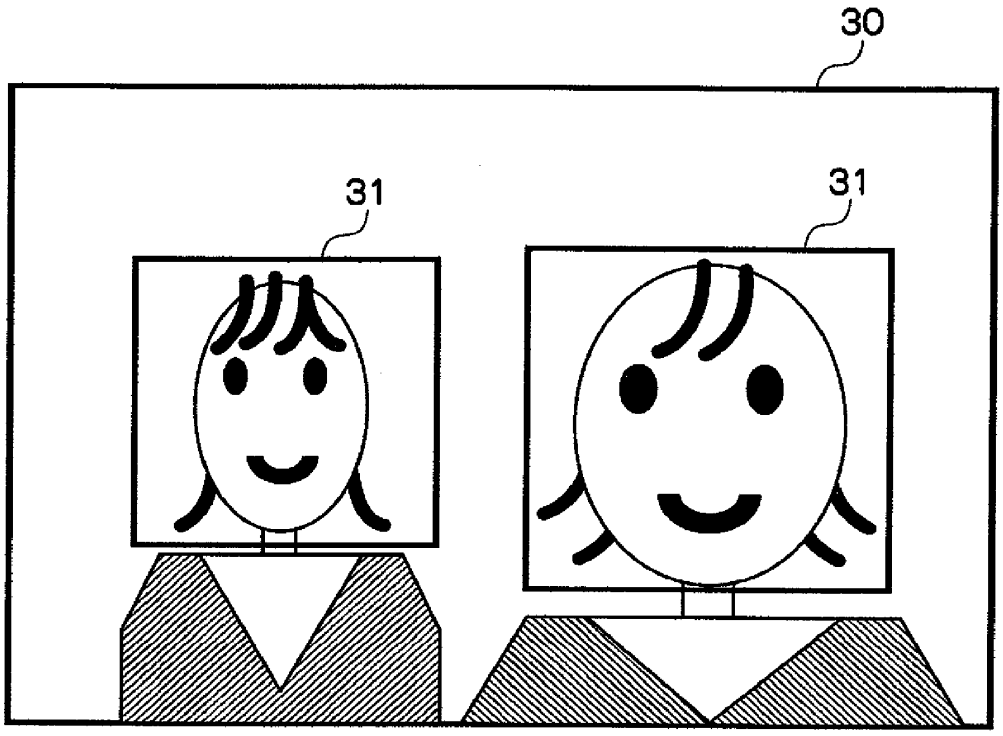


FIG. 5

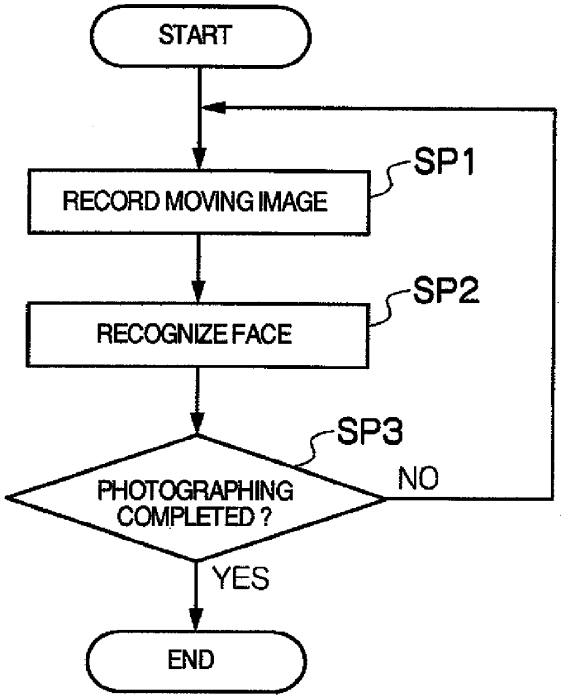

START
SP1
RECORD MOVING IMAGE
SP2
RECOGNIZE FACE
SP3
PHOTOGRAPHING COMPLETED ?
NO
YES
END

FIG. 6

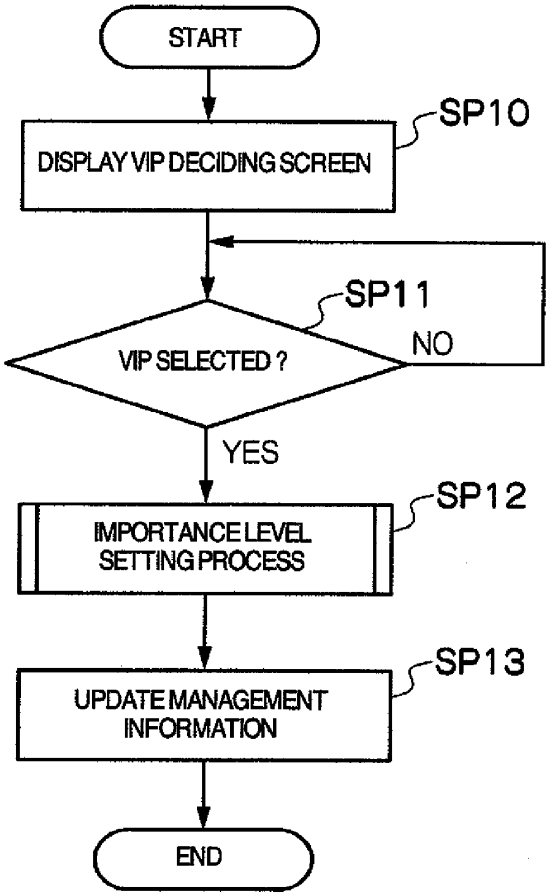

START
SP10
DISPLAY VIP DECIDING SCREEN
SP11
VIP SELECTED ?
NO
YES
SP12
IMPORTANCE LEVEL SETTING PROCESS
SP13
UPDATE MANAGEMENT INFORMATION
END

FIG. 7

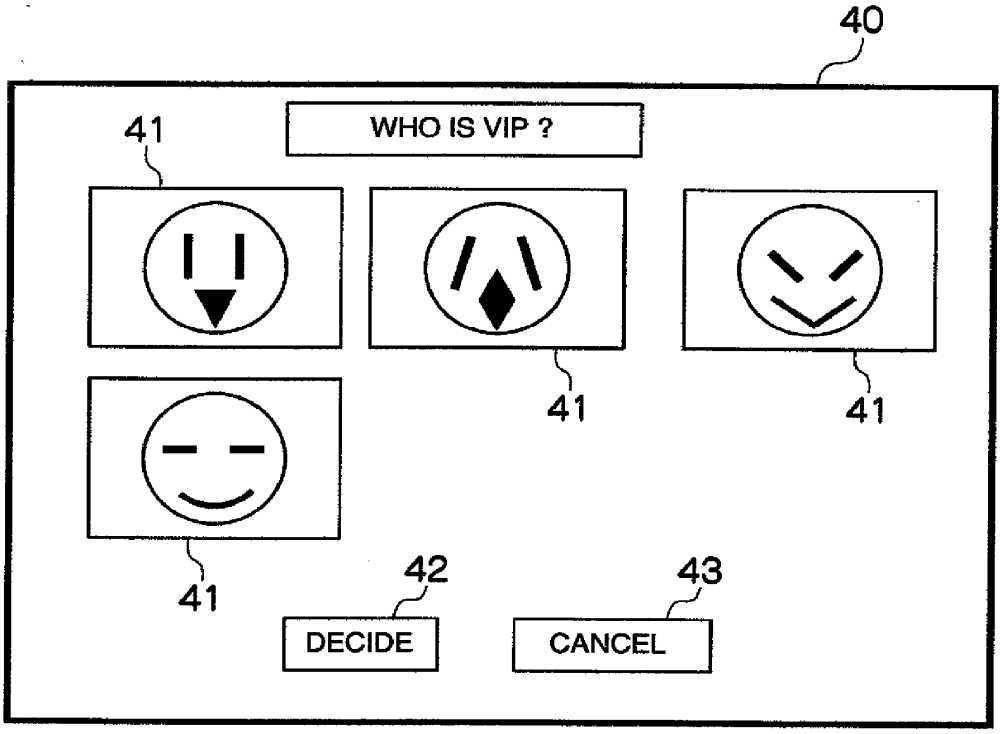


FIG. 8

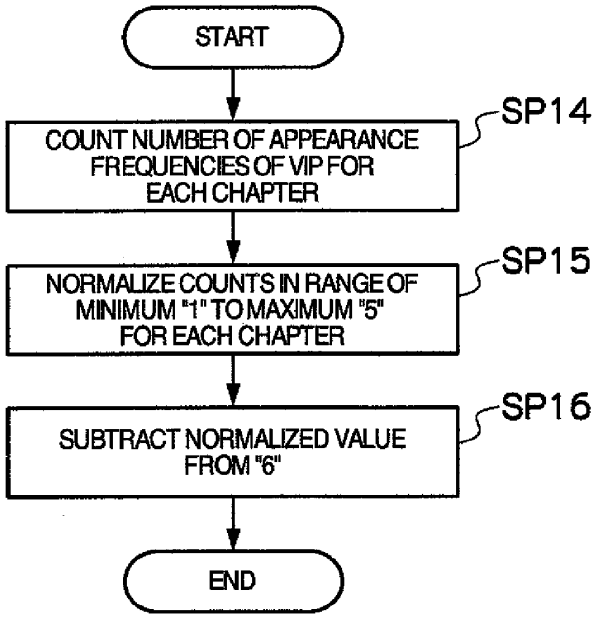


FIG. 9

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

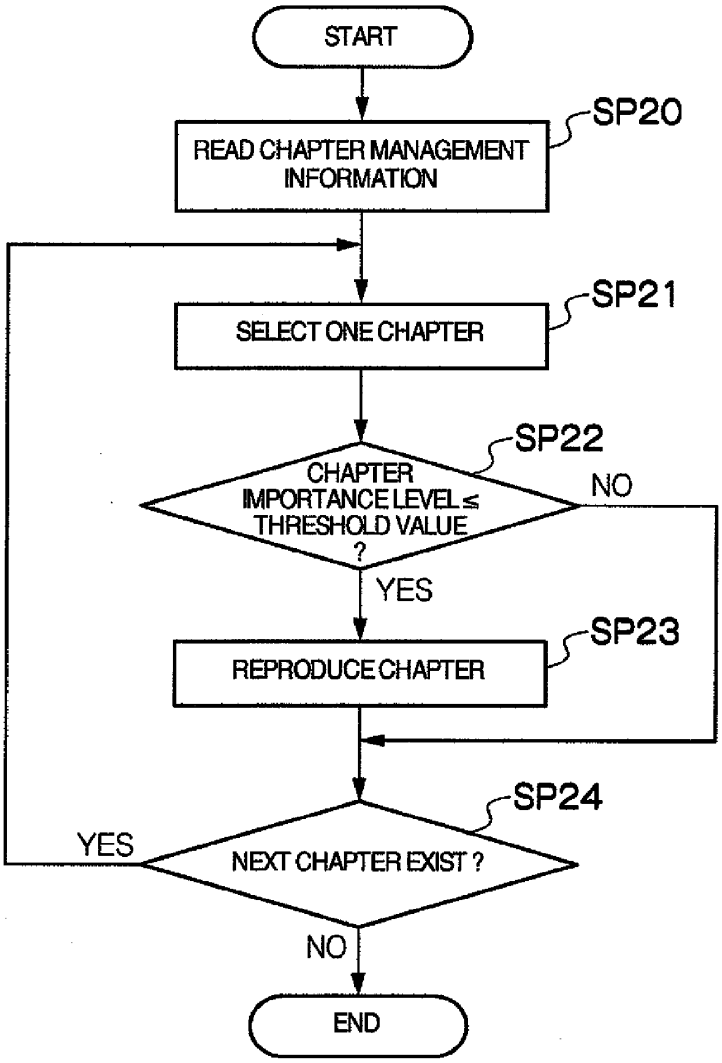

START
READ CHAPTER MANAGEMENT INFORMATION
SP20
SELECT ONE CHAPTER
SP21
CHAPTER IMPORTANCE LEVEL ≤ THRESHOLD VALUE ?
SP22
NO
YES
REPRODUCE CHAPTER
SP23
NEXT CHAPTER EXIST ?
SP24
YES
NO
END

FIG. 11

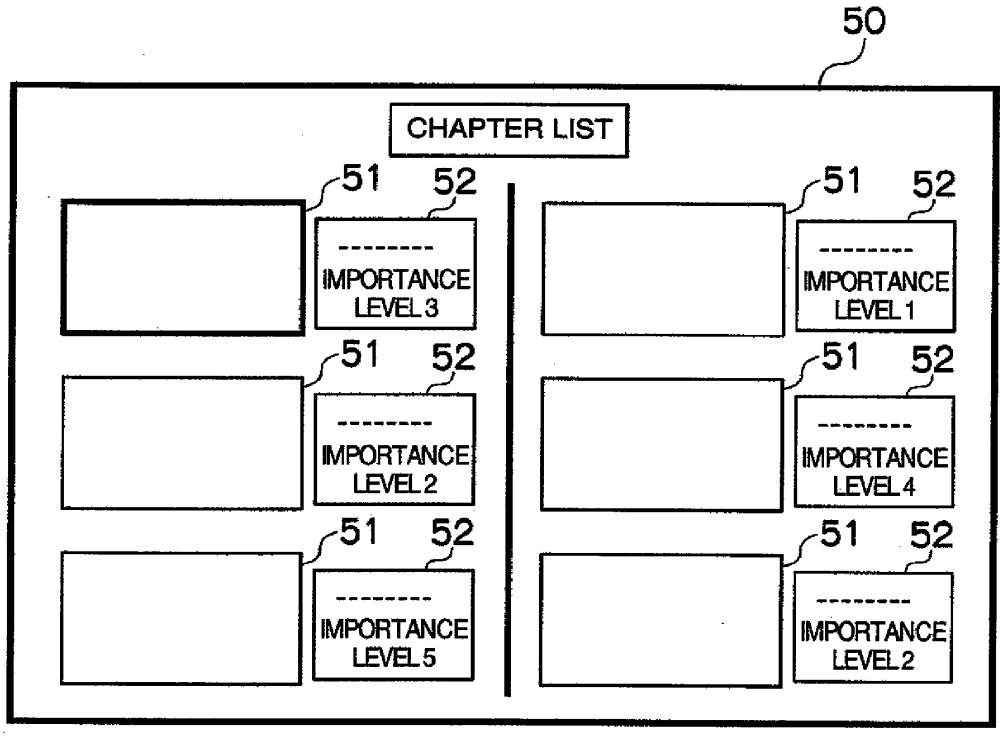

50
CHAPTER LIST
51
52
IMPORTANCE LEVEL 3
IMPORTANCE LEVEL 1
IMPORTANCE LEVEL 2
IMPORTANCE LEVEL 4
IMPORTANCE LEVEL 5
IMPORTANCE LEVEL 2

FIG. 12

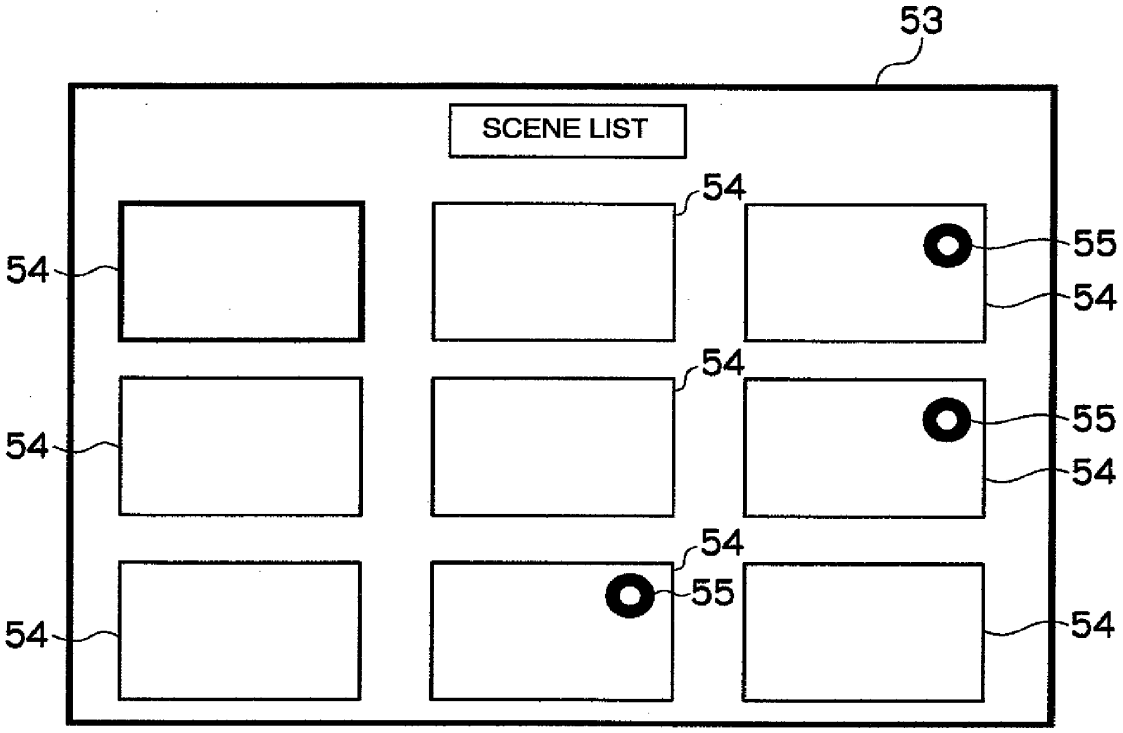


FIG. 13

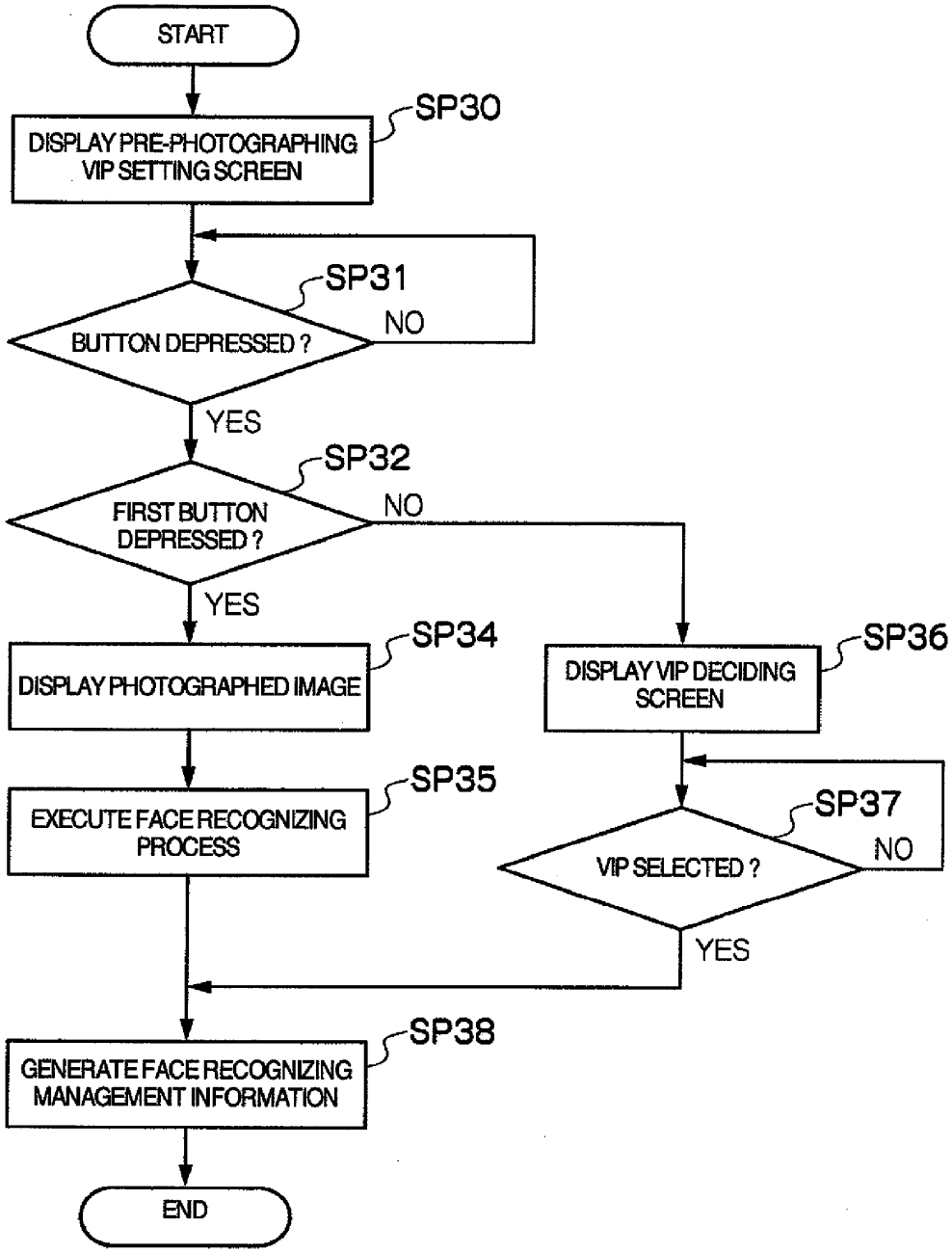

START
DISPLAY PRE-PHOTOGRAPHING VIP SETTING SCREEN
SP30
BUTTON DEPRESSED ?
SP31
NO
YES
FIRST BUTTON DEPRESSED ?
SP32
NO
YES
DISPLAY PHOTOGRAPHED IMAGE
SP34
DISPLAY VIP DECIDING SCREEN
SP36
EXECUTE FACE RECOGNIZING PROCESS
SP35
VIP SELECTED ?
SP37
NO
YES
GENERATE FACE RECOGNIZING MANAGEMENT INFORMATION
SP38
END

FIG. 14

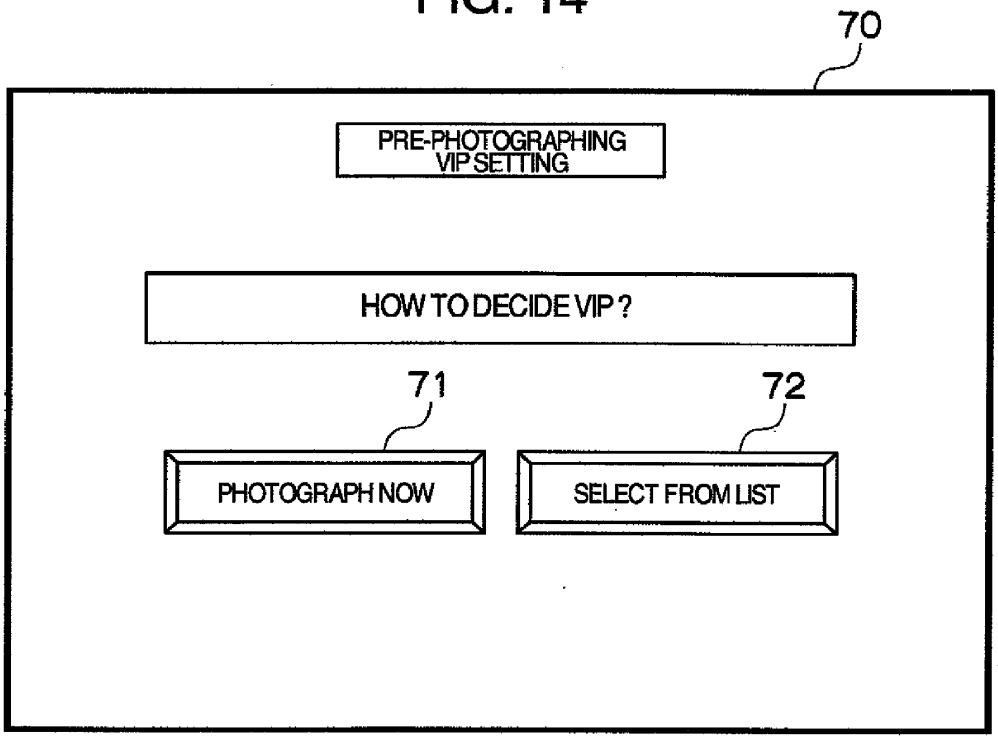
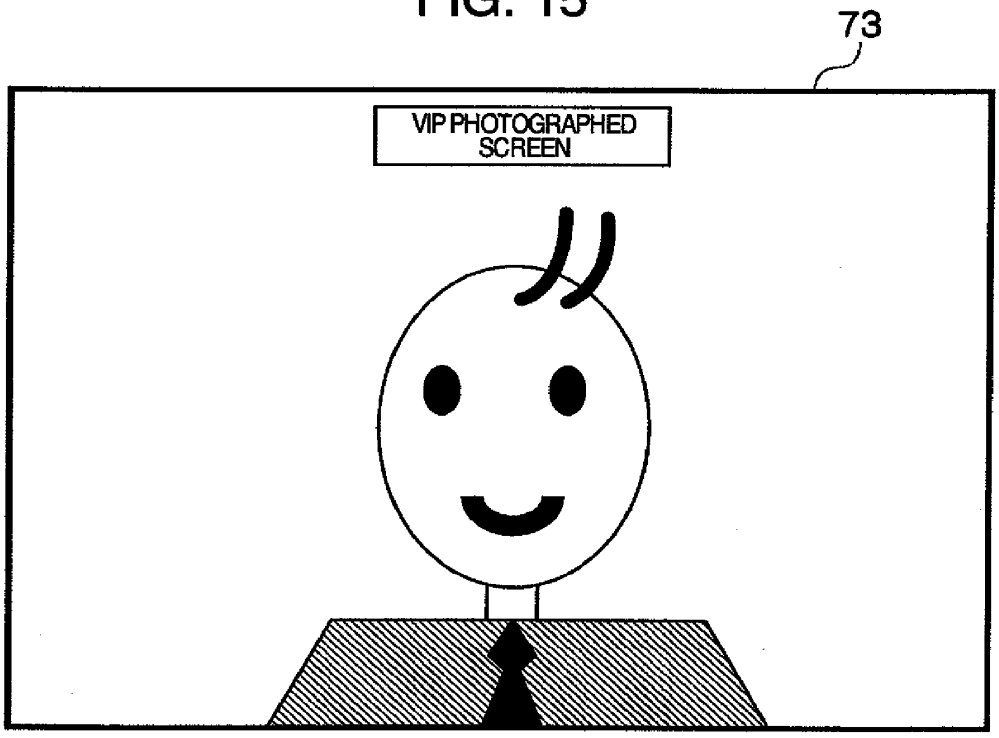

70
PRE-PHOTOGRAPHING VIP SETTING
HOW TO DECIDE VIP ?
71
72
PHOTOGRAPH NOW
SELECT FROM LIST

FIG. 15


73
VIP PHOTOGRAPHED SCREEN

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-9940-05

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	320	320
UTILITY SEARCH FEE	1111	1	700	700
UTILITY EXAMINATION FEE	1311	1	800	800
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1820**

Electronic Acknowledgement Receipt	
EFS ID:	43444858
Application Number:	17397040
International Application Number:	
Confirmation Number:	4409
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-9940-05
Receipt Date:	09-AUG-2021
Filing Date:	
Time Stamp:	13:48:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1820
RAM confirmation Number	E202189D48441930
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	Application Data Sheet	9940-05-ADS.pdf	1226379 1e3adcf39b76db183320f5b7f633cfe0bd8d94f4	no	8
Warnings:					
Information:					
2	Power of Attorney	9940-05-POA-.pdf	443005 bbe1f16de8c0e93c29a05cbae33534204fb864c7	no	4
Warnings:					
Information:					
3	Transmittal Letter	ASA-9940-05-IDS.pdf	16081 fc74465209804d5dce6f5cd4239c9c668d767185	no	2
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	9940-05-SB08A.pdf	1042924 9ef883027cfb76e048c695831f826b69e5ea05bf	no	24
Warnings:					
Information:					
5		ASA-9940-05-spec-.pdf	2794058 0fc33ea242f535e52b044dc8a41a174727b828dd	yes	37

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	35
Claims	36	36
Abstract	37	37

Warnings:					
Information:					
6	Oath or Declaration filed	ASA-9940-05-Dec.pdf	82081 7c7be2c27387c375032cb09923624a0b17334b4f	no	2
Warnings:					
Information:					
7	Drawings-only black and white line drawings	ASA-9940-05-drawings.pdf	154560 3ac664ae982d7e0e71b6cc1fe3ea1bf8b3d81149	no	12
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	43981 59edf3aa6b0b423e71f1e9f0fc8c2adc44a80b2f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	5803069		

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<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.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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-9940-05	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	12	**Suggested Figure for Publication (if any)**	

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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	15898351	2018-02-16

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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)
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. — Add

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).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)
2008-130678	JP	2008-05-19	

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

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

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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 i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button. Add

Signature:

Remove

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)	2021-08-09
First Name	John	Last Name	Mattingly	Registration Number	30293

Additional Signature may be generated within this form by selecting the Add button. Add

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	ASA-9940-05
	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.**

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Privacy Act Statement

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

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

1 The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent CooperationTreaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/397,040	08/09/2021	2484	1820	ASA-9940-05	1	1

CONFIRMATION NO. 4409

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

FILING RECEIPT



Date Mailed: 08/20/2021

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 15/898,351 02/16/2018 PAT 11094350
which is a CON of 14/478,020 09/05/2014 PAT 10176848
which is a CON of 12/430,185 04/27/2009 PAT 9159368

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.

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Page 95 of 254

If Required, Foreign Filing License Granted: 08/19/2021

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/397,040**

Projected Publication Date: 11/25/2021

Non-Publication Request: No

Early Publication Request: No
Title

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Preliminary Class

386

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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

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

NOT GRANTED

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

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PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/397,040

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
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), (i), 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(i))	1 minus 20 =	*			OR	x 100 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*				x 480 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	1820

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05

CONFIRMATION NO. 4409

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

PUBLICATION NOTICE

OC000000130052866

Title:RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Publication No.US-2021-0366521-A1
Publication Date:11/25/2021

NOTICE OF PUBLICATION OF APPLICATION

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

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

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's 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 Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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Doc Code: PA
Document Description: Power of Attorney

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

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

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

出願番号 Application Number	17/397,040
出願日 Filing Date	08-09-2021
第一発明者 First Named Inventor	Mari YOSHIDA
名称 Title	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
技術審査部門 Art Unit	
審査官氏名 Examiner Name	
特許弁護士整理番号 Attorney Docket Number	ASA-9940-05

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

署名 Signature	/Shrinath Malur/	署名日(任意) Date (Optional)	January 31, 2022
氏名 Name	Shrinath Malur	登録番号 Registration Number	34663
役職（出願人が法人の場合） Title (if Applicant is a juristic entity)			

出願人名（出願人が法人の場合） Applicant Name (if Applicant is a juristic entity)	Maxell, Ltd.

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

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

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

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

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

Doc Code: PA
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
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出願人による委任状
POWER OF ATTORNEY BY APPLICANT

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

出願番号 Application Number	出願日 Filing Date

（注記：PTO/AIA82Aに同じ情報が明記されている場合、上の枠内は空欄でも可）
(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ 私は、下記顧客番号に関連する特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。
I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above:
24956
又は
OR

☐ 私は、添付のリスト（PTO/AIA/82C）に記載の特許弁護士を、当方の弁護士あるいは代理人に指名し、添付の伝送書（PTO/AIA/82A）内もしくは上記に記載の特許出願に関連した米国特許商標庁との業務の全てを同弁護士あるいは代理人に委任します。（注記：PTO/AIA/82Cを記入すること。）
I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

添付の伝送書又は上記枠内にて特定された出願に対する郵便物送付先を下記のいずれかに登録または変更してください。
Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ 上記顧客番号に付随する住所
The address associated with the above-mentioned Customer Number
又は
OR

☐ 顧客番号に付随する住所
The address associated with Customer Number:
又は
OR

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

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

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

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

私は出願人であり（出願人が法人の場合、出願人名を下記枠内に記入）：
I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

Maxell, Ltd.

☐ 発明者もしくは共同発明者である（下記役職の明記は不要）
Inventor or Joint Inventor (title not required below)

☐ 死亡したもしくは成年被後見人である発明者の法定代理人である（下記役職の明記は不要）
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ 被譲渡人もしくは発明者が譲渡する義務を負う人物である
Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ 上記以外で、十分な独占的所有権を示す人物である（例：37 CFR 1.46(b)(2)に基づく申請が本出願において認められた、又は本書類と共にその申請がなされている場合）（出願人が法人の場合、署名者の役職を明記すること）
Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

特許出願人の署名
SIGNATURE of Applicant for Patent

下記署名者（役職は下記に記載）は出願人の代理人と認められている（出願人が法人の場合等）
The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

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

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

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

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

Electronic Acknowledgement Receipt	
EFS ID:	44872750
Application Number:	17397040
International Application Number:	
Confirmation Number:	4409
Title of Invention:	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF
First Named Inventor/Applicant Name:	Mari YOSHIDA
Customer Number:	24956
Filer:	Shrinath Malur/Kristin Huber
Filer Authorized By:	Shrinath Malur
Attorney Docket Number:	ASA-9940-05
Receipt Date:	31-JAN-2022
Filing Date:	09-AUG-2021
Time Stamp:	11:57:00
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	Assignee showing of ownership per 37 CFR 3.73	ASA-9940-05_AIA-373c-form.pdf	124447 d960a43b2cb986aa7f69b00bfaa37ce6950bc176	no	3

Warnings:

Information:					
2	Power of Attorney	ASA-9940-05_POA_Maxell.pdf	1743467 5c784525ccb2bfdc248e9a869a536d2162335cab	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	1867914	

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.

PTO/AIA/96 (08-12)
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STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: MAXELL, LTD.

Application No./Patent No.: 17/397,040 Filed/Issue Date: 08-09-2021

Titled: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

MAXELL, LTD., a Corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

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

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

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

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

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

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

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

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

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

1. From: Inventor To: HITACHI, LTD.

   The document was recorded in the United States Patent and Trademark Office at
   Reel 022596, Frame 0595, or for which a copy thereof is attached.

2. From: HITACHI, LTD. To: HITACHI CONSUMER ELECTRONICS CO., LTD.

   The document was recorded in the United States Patent and Trademark Office at
   Reel 030622, Frame 0001, or for which a copy thereof is attached.

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

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

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: HITACHI CONSUMER ELECTRONICS CO., LTD. To: HITACHI MAXELL, LTD.

The document was recorded in the United States Patent and Trademark Office at
Reel 033685, Frame 0883, or for which a copy thereof is attached.

4. From: HITACHI MAXELL, LTD. To: MAXELL, LTD.

The document was recorded in the United States Patent and Trademark Office at
Reel 045142, Frame 0208, or for which a copy thereof is attached.

5. From: MAXELL, LTD. To: MAXELL HOLDINGS, LTD.

The document was recorded in the United States Patent and Trademark Office at
Reel 058255, Frame 0579, or for which a copy thereof is attached.

6. From: MAXELL HOLDINGS, LTD. To: MAXELL, LTD.

The document was recorded in the United States Patent and Trademark Office at
Reel 058666, Frame 0407, or for which a copy thereof is attached.

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

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

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

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

/Shrinath Malur/	January 31, 2022
Signature	Date
Shrinath Malur	34663
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

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

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05

CONFIRMATION NO. 4409

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

POA ACCEPTANCE LETTER

OC000000131534687

Date Mailed: 02/03/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 01/31/2022.

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

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

/atesfai/

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

24956 7590 04/27/2022

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

EXAMINER
HUNTER, MISHAWN N

ART UNIT	PAPER NUMBER
2484	

NOTIFICATION DATE	DELIVERY MODE
04/27/2022	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

Maxell, Ltd.
Ex. 2036
Page 109 of 254

Office Action Summary	**Application No.** 17/397,040	**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 --

Period for Reply

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

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

Status

1)☑ Responsive to communication(s) filed on 8/9/21.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL.** 2b) ☑ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

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

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 8/9/21 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☑ Certified copies of the priority documents have been received in Application No. 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)).

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

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

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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.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman, 11* F.3d 1046, 29 USPQ 2d 2010 (Fed. Cir. 1993); *In re Long* 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum,* 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel,* 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321 (c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting being unpatentable over claims 1 of U.S. Patent No. 10,176,848 B2 in view of TOKUSE (US Pub. No. 2008/0199056).

Regarding **claim 1** of this application, claim 1 of U. S. Patent No. 10,176,848 B2

recite all the claimed limitations except for a display; and a controller; wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium, and to register a person whose face has been recognized by the face recognizing process as a first person; and wherein the controller is operable under a first controlling mode, in an event that the image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium, the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person.

However, TOKUSE teaches a display (fig 1, 25 para 0074 illustrates a display); and a controller (fig 1, 27, para 0076 illustrates a control unit); wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium (para 0082 illustrates executing face recognition process for image information already recorded in recording medium) and to register a person whose face has been recognized by the face recognizing process as a first person (para 0042, 0082 and 0083 illustrate registering a person whose face has been recognized by face recognizing process) and wherein the is operable under a first controlling mode, in an event that the image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium (para 0172 illustrates reproducing image information sequentially from recording medium) the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person.(para 0176 and 0177 illustrates reproducing image information based on high level importance

among image information)

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate a display; and a controller; wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium, and to register a person whose face has been recognized by the face recognizing process as a first person; and wherein the controller is operable under a first controlling mode, in an event that the image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium, the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person as taught by TOKUSE in claim 1 U. S. Patent No. 10,176,848 B2 in order to perform image processing appropriate for a subject image with high importance (TOKUSE para 0025 lines 4-5)

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 is rejected under pre-AIA 35 U.S.C. 102 (e) as being anticipated by TOKUSE (US Pub. No. 2008/0199056).

Regarding **claim 1**, TOKUSE discloses a recording and reproducing apparatus for recording and reproducing image information (para 0071 illustrates recording and reproducing image information) comprising:

a photographing device for photographing an object and for generating image information (para 0073 illustrates photographing an object and para 0071 illustrates generating image information);

a recording device for recording the image information having been generated by the photographing device into a recording medium (para 0073 and 0075 illustrates recording image information generated by photographing device into recording medium);

a face-recognition processor for executing a face recognizing process for the image information (para 0041 illustrates face recognition process for image information);

a reproducing device for reproducing the image information having been recorded by the recording device from the recording medium (para 0172 illustrates reproducing image information recorded in recording medium);

a display (fig 1, 25 para 0074 illustrates a display); and

a controller (fig 1, 27, para 0076 illustrates a control unit);

wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium (para 0082 illustrates executing face recognition process for image information already recorded in recording medium), and to register a person whose face has been recognized by the face recognizing process as a first person (para 0042, 0082 and 0083 illustrate registering a person whose face has been recognized by face recognizing process); and

wherein the controller is operable under a first controlling mode, in an event that the

image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium (para 0172 illustrates reproducing image information sequentially from recording medium), the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person (para 0176 and 0177 illustrates reproducing image information based on high level importance among image information).

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 on 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 an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	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	04/22/2022								
	1	✓								

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	Art Unit
	Mishawn N Hunter	2484

CPC - Searched*		
Symbol	**Date**	**Examiner**
G11B 27/34, 27/105, 27/28, 27/30	4/22/2022	MH
H04N 5/77, 5/772, 5/781, 5/85, 9/8042	4/22/2022	MH
G06F 16/745, 16/73	4/22/2022	MH
G06K 9/00	4/22/2022	MH
G06V 40/172, 20/40	4/22/2022	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	4/22/2022	MH
performed CPC search (see above) further limited by text search in PE2E, see attached	4/22/2022	MH
performed NPL search using IP.com, see attached	4/22/2022	MH

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

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Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

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

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PTO/SB/08a (03-15)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	
	Filing Date	2021-08-09
	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
	Attorney Docket Number	ASA-9940-05

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
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	2	7853897		2010-12-14	Ogawa et al.	Corr. to JP 2008017041
	3	7474764		2009-01-06	Segawa et a;/	Corr. to JP 2006074463
	4	5809202		1998-09-15	Gotoh et al.	
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.H./

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	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.	
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	89	7551755	B1	2009-06-23	STEINBERG et al.	
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	91	7711241	B2	2010-05-04	MORI et al.	
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	93	9665597	B2	2017-05-30	HAITANI et al.	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060188225	A1	2006-08-24	Yamakage; Tomoo	

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	Examiner Name	
	Attorney Docket Number	ASA-9940-05

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	3	20070019083	A1	2007-01-25	Nakashima; Teruyoshi	
	4	20020175997		2002-11-28	Takata et al.	Corr. to JP 2003046911
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	Attorney Docket Number	ASA-9940-05

	24	20100014719	A1	2010-01-21	DATE et al.	Corresponds to Foreign Patent Document 2008-78713
	25	20070171296	A1	2007-07-26	TSUKIJI et al.	Corresponds to Foreign Patent Document 2007-6033
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	YOSHIDA, M.
	Art Unit	
	Examiner Name	
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	1	2002-333652 w/abs	JP	A	2002-11-22	OKI ELECTRIC IND CO LTD		

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	Examiner Name	
	Attorney Docket Number	ASA-9940-05

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	1	Japanese Office Action received in corresponding Japanese Application No. 2016-043206 dated February 7, 2017	☒
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EXAMINER SIGNATURE

Examiner Signature	/MISHAWN N. HUNTER/	Date Considered	04/22/2022

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	Examiner Name	
	Attorney Docket Number	ASA-9940-05

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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)	2021-08-09
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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L1	19218	maxell.as.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/04/22 01:45 PM
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L3	5	(L1 L2) AND (recording AND reproducing AND face AND recognition AND importance).clm.	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/04/22 01:46 PM
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L5	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 "20070171796" OR "20070237360" OR "20080019665" OR "20080131073" OR "20080144890" OR "20080199056" OR "20080218595" OR "20080225155" OR "20080232651" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/04/22 01:49 PM

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L6	65	L5 AND ((face facial) adj2 recognition)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/04/22 01:50 PM
L7	16	L6 AND (record$3 WITH (face facial) WITH (recogni$))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/04/22 01:54 PM
L8	8	L7 AND ((register$3 registration) WITH (person people user face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2022/04/22 01:55 PM
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		(recogni$))					
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/397,040	Filing Date 08/09/2021	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $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).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	10/25/2022	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 18	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	LIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/DORIS M KING/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Maxell, Ltd.

Confirmation No.: 4409

Serial No. : 17/397,040

Filed : August 9, 2021

For : RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Group : 2484

Examiner : Mishawn N. HUNTER

Docket No. : ASA-9940-05

Customer No.: 24956

AMENDMENT

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

October 25, 2022

Sir:

In response to the Office Action mailed April 27, 2022, please amend the above-identified patent application as follows. A fee for a 3-month Extension of Time accompanies this response.

Amendments to the Claims begin 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 listings, of claims in the application:

Listing of Claims:

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

a photographing ~~device for photographing~~ sensor configured to photograph an object and ~~for generating~~ generate image information;

a ~~recording device for recording~~ recorder configured to record the image information ~~having been generated~~ generated by the photographing ~~device~~ sensor in ~~into~~ a recording medium;

~~a face-recognition processor for executing a face-recognizing process for the image information;~~

a ~~reproducing device for reproducing~~ reproducer configured to reproduce the image information ~~having been~~ recorded by the ~~recording device from the recording medium~~recorder;

~~a display; and~~processing circuitry configured to:

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

register a person in the image information as a specific person, wherein a first person with a face is obtained by newly photographing the first person in a

photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person;

firstly pick out image information which includes both the registered first specific person and the registered second specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and

control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition ~~a controller;~~

~~wherein the face-recognition processor is configured to execute the face recognizing process for the image information having been recorded in the recording medium, and to register a person whose face has been recognized by the face recognizing process as a first person; and~~

~~wherein the controller is operable under a first controlling mode, in an event that the image information is reproduced, for causing the reproducing device to selectively reproduce image information sequentially from the recording medium, the image information to be reproduced being recognized with relatively high importance level among image information having been recognized as including information on the first person~~.

2. (New) The recording and reproducing apparatus according to claim 1,

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.

3. (New) 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.

4. (New) The recording and reproducing apparatus according to claim 1,

wherein the recording medium further stores instructions that, when executed by the processing circuitry, cause the processing circuitry to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

5. (New) The recording and reproducing apparatus according to claim 1, further comprising

a display,

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

6. (New) The recording and reproducing apparatus according to claim 5, wherein the frame is a rectangular frame.

7. (New) The recording and reproducing apparatus according to claim 1, 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.

8. (New) The recording and reproducing apparatus according to claim 7, wherein the icon is displayed on the thumbnail.

9. (New) The recording and reproducing apparatus according to claim 1, wherein the predetermined condition is set in accordance with an instruction by a user.

10. (New) A recording and reproducing method for recording and reproducing image information, comprising:

photographing, by a photographing sensor, an object and generating image information;

recording, by a recorder, the image information generated by the photographing sensor in a recording medium;

reproducing, by a reproducer, the image information recorded by the recorder;

executing, by processing circuitry, a face-recognizing process on the image information generated by the photographing sensor to detect a face;

registering, by processing circuitry, a person in the image information as a specific person, wherein a first person with a face is obtained by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, wherein a second person with a face is obtained by newly

photographing the second person in a photographing mode and thereafter registered as a second specific person;

firstly, selecting, by processing circuitry, image information which includes both the registered first specific person and the registered second specific person,

secondly, selecting, by processing circuitry, the image information based on a predetermined condition from among the selected image information which includes both the registered first specific person and the registered second specific person, and

controlling, by processing circuitry, the reproducer to selectively and sequentially reproduce the image information selected based on the predetermined condition.

11. (New) The recording and reproducing method according to claim 10,

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.

12. (New) The recording and reproducing method according to claim 11,

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.

13. (New) The recording and reproducing method according to claim 10,

storing, in the recording medium, instructions that, when executed by the processing circuitry, cause the processing circuitry to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

14. (New) The recording and reproducing method according to claim 10,

in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor,

displaying, by a display, the video information with a frame surrounding at least a portion of the face of the person.

15. (New) The recording and reproducing method according to claim 14, wherein the frame is a rectangular frame.

16. (New) The recording and reproducing method according to claim 10, generating, by the processing circuitry, 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.

17. (New) The recording and reproducing method according to claim 16, wherein the icon is displayed on the thumbnail.

18. (New) The recording and reproducing method according to claim 10, wherein the predetermined condition is set in accordance with an instruction by a user.

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REMARKS

Claims 1-18 are pending in this application. Claim 1 has been amended. New claims 2-18 have been added. No new matter has been added.

Claim for Priority

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

Information Disclosure Statement

Applicants appreciate the Examiner's consideration of the references submitted in the Information Disclosure Statement filed August 9, 2021.

Double Patenting Rejections

Claim 1 stands rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 10,176,848 B2. It is submitted that the amendments made to claim 1 overcome the double patenting rejection and therefore a Terminal Disclaimer is not required to be submitted in order to overcome the double patenting rejection.

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Rejections Under 35 U.S.C. §§ 102 and 103

Claim 1 stands rejected under 35 U.S.C. §102(e) as being anticipated by Tokuse (U.S. Pub. No. 2008/0199056).

Applicants request reconsideration of the rejections in view of the foregoing amendments and for the following reasons.

Support for the amendments to claim 1 is found in the original disclosure. Further, claim 1 sets forth, in part, limitations that are similar to those found in claim 18 of U.S. Patent No. 10,176,848 (hereafter parent patent '848), which issued from parent application no. 12/430,185. As compared with claim 18 of the parent patent '848, amended claim 1 additionally sets forth a first person with a face is obtained by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person; and firstly pick out image information which includes both the registered first specific person and the registered second specific person. See paras. [0069] and [0070] of the published specification (P.G. Pub. 2021/0366521) and Fig. 7, for example, for support of the amendments.

Claims 2-3 are patterned after claims 19 and 20 of parent patent '848.

Claim 4 includes the limitation of executing the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus. See paras. [0119] of the published specification.

Claim 5 includes that, in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person. Claim 6 sets forth that the frame is a rectangular frame. See rectangular frame 31 that is displayed in a photographed image 30, as shown in Fig. 4, for example.

In claim 7, a thumbnail corresponding to the recorded image information is claimed to be generated 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. Claim 8 sets forth that the icon is displayed on the thumbnail. See Fig. 12, for example, which shows thumbnail images 54 and icons 55.

Claim 9 includes that the predetermined condition is set in accordance with an instruction by a user. This limitation is found in claim 18 of parent patent '848.

Independent claim 10 is a method claim of recording and reproducing image information that includes the limitations of claim 1. Dependent claims 11-18 are dependent from claim 10 and are directed to the same limitations set forth in claims 2-9.

As compared with Tokuse, claim 1 sets forth, in part, to execute a face-recognizing process on the image information generated by the photographing sensor to detect a face, register a person in the image information as a specific person, wherein a first person with a face is obtained by newly photographing the

first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person. Additionally, claim 1 includes to firstly pick out image information which includes both the registered first specific person and the registered second specific person, secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition. Accordingly, Tokuse does not disclose the invention as claimed in claim 1, and therefore, it is submitted that claim 1 is not anticipated by Tokuse.

Method claim 10 includes the same limitations as claim 1, and therefore should be found allowable over Tokuse for similar reasons. Claims 2-9 and 11-18 should also be found allowable at least due to the dependency of these claims from an allowable base claim, as well as for the additional features that each recites. As such, it is respectfully requested that the rejection under 35 U.S.C. §102 be withdrawn.

Conclusion

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

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417 (referencing Attorney Docket No. ASA-9940-05).

Respectfully submitted,

MATTINGLY & MALUR, PC

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

Electronic Patent Application Fee Transmittal	
Application Number:	17397040
Filing Date:	09-Aug-2021
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-9940-05
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:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1480	1480
Miscellaneous:				
		Total in USD ($)		**1480**

Electronic Acknowledgement Receipt	
EFS ID:	46885344
Application Number:	17397040
International Application Number:	
Confirmation Number:	4409
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-9940-05
Receipt Date:	25-OCT-2022
Filing Date:	09-AUG-2021
Time Stamp:	13:38:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$1480
RAM confirmation Number	E20220OD39110070
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)	

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37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

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1		9940-05-AMD01.pdf	77172 9f15eaab638f0be9abf7242e6706a55b12a49101	yes	14

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Request for Reconsideration-After Non-Final Rejection	1	1
	Claims	2	9
	Applicant Arguments/Remarks Made in an Amendment	10	14

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	38518 38d6f439d5fc20d2ff398d236144e3c5b9a81eed	no	2
Warnings:					
Information:					
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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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Notice of References Cited	Application/Control No. 17/397,040	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-20060210264-A1	09-2006	Saga; Yoshihiro	H04N23/635	348/E5.045
	B					
	C					
	D					
	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
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	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	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	04/22/2022								
	1	✓								
	2	O								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	O								
	8	O								
	9	✓								
	10	✓								
	11	O								
	12	✓								
	13	✓								
	14	✓								
	15	✓								
	16	O								
	17	O								
	18	✓								

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	Art Unit
	Mishawn N Hunter	2484

CPC - Searched*		
Symbol	**Date**	**Examiner**
G11B 27/34, 27/105, 27/28, 27/30	4/22/2022	MH
H04N 5/77, 5/772, 5/781, 5/85, 9/8042	4/22/2022	MH
G06F 16/745, 16/73	4/22/2022	MH
G06K 9/00	4/22/2022	MH
G06V 40/172, 20/40	4/22/2022	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	4/22/2022	MH
performed CPC search (see above) further limited by text search in PE2E, see attached	4/22/2022	MH
performed NPL search using IP.com, see attached	4/22/2022	MH
updated PE2E search, see attached	4/22/2023	MH
updated CPC search (see above) further limited by text search in PE2E, see attached	4/22/2023	MH

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

Maxell, Ltd.
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	Art Unit
	Mishawn N Hunter	2484

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

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

Maxell, Ltd.
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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L16	78976	(g11b27/34 g06f16/745 g06f16/73 g06v40/172 g06v20/40 g06k9/00 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	2023/04/13 05:38 PM
L18	64229	((face facial person) near2 recogni$) WITH (image photograph$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 05:38 PM
L19	8893	((face facial person) near2 recogni$) WITH (image photograph$) WITH (detect$ near2 (face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 05:38 PM
L20	2140	L16 AND L19	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 05:39 PM
L21	3567	L18 AND ((face facial person) near2 recogni$) WITH (register$ catalog$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 08:34 PM
L22	918	L16 AND L21	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 08:35 PM
L23	21	L22 AND (predetermined adj2 (medium encod$ compress$ decod$ decompress$))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 08:40 PM
L25	0	L22 AND (predefined adj2 (medium encod$ compress$ decod$ decompress$))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/13 08:52 PM
L28	192	display$ WITH rectangul$ WITH frame WITH photograph$	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/22 04:12 PM
L29	95	L28 AND @ad<"20080519"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/04/22 04:13 PM
L30	76	L28 AND @ad<"20080519"	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/22 04:14 PM
L31	16	display$ WITH thumbnail WITH icon WITH importance	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/22 04:20 PM
L32	6957	display$ WITH thumbnail WITH icon	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/22 04:23 PM
L33	18	thumbnail WITH icon WITH importance	(US-PGPUB; USPAT)	OR	ON	ON	2023/04/22 04:23 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

24956 7590 04/27/2023

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EXAMINER
HUNTER, MISHAWN N

ART UNIT	PAPER NUMBER
2484	

NOTIFICATION DATE	DELIVERY MODE
04/27/2023	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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Office Action Summary	**Application No.** 17/397,040	**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 --

Period for Reply

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

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

Status

1)☑ Responsive to communication(s) filed on 10/25/22.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☑ This action is **FINAL.** 2b) ☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☑ Claim(s) 1 is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 1,3-6,9-10,12-15 and 18 is/are rejected.

8) ☑ Claim(s) 2,7-8,11 and 16-17 is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement

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

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☑ The drawing(s) filed on 8/9/21 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☑ Certified copies of the priority documents have been received in Application No. 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)).

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

Attachment(s)

1) ☑ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

4) ☐ Other: _____.

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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.

Response to Arguments

2. Applicant's arguments, see pg. 10 of Remarks, filed 10/25/22, with respect to the double patenting rejection of claim 1 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new double patenting rejection is made in view of US Pat. No. 11,094,350.

3. Applicant's arguments, see pgs. 11-14 of Remarks, with respect to the rejections of claim 1 under 35 USC 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.

1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

5. Claims 1, 3, 10, and 12 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 6 of U.S. Patent No. 11,094,350. Although the claims at issue are not identical, they are not patentably distinct from each other because claims 1, 3, 10, and 12 are generic to all that is recited in claims 1 and 6 of the patent. It would have been

obvious to change the language, which does not give any novelty over one another. That is, claims 1, 3, 10, and 12 are anticipated by claims 1 and 6 of the patent.

Claim Rejections - 35 USC § 103

6. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

7. This application currently names joint inventors. In considering patentability of the claims under pre-AIA 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of pre-AIA 35 U.S.C. 103(c) and potential pre-AIA 35 U.S.C. 102(e), (f) or (g) prior art under pre-AIA 35 U.S.C. 103(a).

8. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 4, 9, 10, 13, and 18 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Tokuse (US Pub. No. 2008/0199056) in view of Nakashima (US Pub. No. 2007/0019083).

10. Consider claim 1. Tokuse teaches a recording and reproducing apparatus for recording and reproducing image information (para 0071 illustrates recording and reproducing image information) comprising: a recorder configured to record the image information generated by the photographing sensor in a recording medium (paras. 0073 and 0075 describe recording image information generated by photographing device into recording medium); a reproducer configured to reproduce the image information recorded by the recorder (para. 0172 describes reproducing image information recorded in recording medium).

Tokuse does not disclose a processing circuitry configured to: execute a face recognizing process on the image information generated by the photographing sensor to detect a face; register a person in the image information as a specific person, wherein a first person with a face is obtain by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person; firstly pick out image information which includes both the registered first specific person and the registered second specific person, secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition.

However, Nakashima teaches a processing circuitry configured to: execute a face recognizing process on the image information generated by the photographing sensor to detect a face (para. 0115 describes extracting facial regions from stored images) register a person in the image information as a specific person, wherein a first person with a face is obtain by newly photographing the first person in a photographing mode and thereafter registered as a first specific person (paras. 0023 describes registers individual information to identification and related information into a database), and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person; firstly pick out image information which includes both the registered first specific person and the registered second specific person (paras. 0057 and 0123 describe acquiring registered facial images), secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person (para. 0165 describes displaying photographed images which correspond to a subject ID stored in the photographed image list table as a "main subject ID" among the subject IDs of the specified list information as "main shots", and displays such "main shots" to be distinguishable from other photographed images), and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition (para. 0165 describes displaying photographed images which correspond to a subject ID stored in the photographed image list table as a "main subject ID" among the subject IDs of the specified list information as "main shots", and displays such "main shots" to be distinguishable from other photographed images).

Therefore, it would have been obvious to one with ordinary skill in the art, before the effective filing date of the claimed invention, to execute a face recognizing process on the image information generated by the photographing sensor to detect a face; register a person in the image information as a specific person, wherein a first person with a face is obtain by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person; firstly pick out image information which includes both the registered first specific person and the registered second specific person, secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition, in order to perform facial recognition to determine matches between registered and extracted facial images as suggested by the prior art.

11. Consider claim 4. Nakashima teaches the recording and reproducing apparatus according to claim 1, wherein the recording medium further stores instructions that, when executed by the processing circuitry, cause the processing circuitry to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus (para. 0049 describes external cameras).

12. Consider claim 9. Nakashima teaches the recording and reproducing apparatus according to claim 1, wherein the predetermined condition is set in accordance with an

instruction by a user (para. 0167-0171 describe wherein the predetermined condition is set in accordance with an instruction by a user).

13. Claims 10, 13, and 18 are rejected using similar reasoning as corresponding claims above.

14. Claims 5, 6, 14, and 15 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Tokuse (US Pub. No. 2008/0199056) in view of Nakashima (US Pub. No. 2007/0019083) in further view of Saga (US Pub. No. 2006/010264).

15. Consider claim 5. Tokuse and Nakashima teach all claimed limitations as stated above, except displaying, wherein, in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person.

However, Saga teaches displaying, wherein, in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person (para. 0078 describes displaying, wherein, in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person).

Therefore, it would have been obvious to one with ordinary skill in the art, before the effective filing date of the claimed invention, to display, wherein, in response to the face-recognizing process detecting that a face of a person is included in video information

generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person

16. Consider claim 6. Saga teaches the recording and reproducing apparatus according to claim 5, wherein the frame is a rectangular frame (para. 0078 describes displaying, wherein, in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, the display displays the video information with a frame surrounding at least a portion of the face of the person).

17. Claims 14 and 15 are rejected using similar reasoning as corresponding claims above.

Allowable Subject Matter

18. Claims 2, 7, 8, 11, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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

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

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 17/397,040	Filing Date 08/09/2021	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

	(Column 1)	(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $100 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $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).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	10/27/2023	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $480 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=		x $0 =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=		x $0 =	
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.	SLIE
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".	/TIMOTHY COLE/
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".	
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.	

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

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

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	17397040	Filing Date	2021-08-09	Docket Number (if applicable)	ASA-9940-05	Art Unit	2484
First Named Inventor	M. YOSHIDA			Examiner Name	Mishawn N. HUNTER		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

☐ Other _____

☒ Enclosed

☒ Amendment/Reply

☐ Information Disclosure Statement (IDS)

☐ Affidavit(s)/ Declaration(s)

☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

☒ **The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.**
The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 501417

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

X Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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.

Signature of Registered U.S. Patent Practitioner			
Signature	/John R. Mattingly/	Date (YYYY-MM-DD)	2023-10-27
Name	John R. Mattingly	Registration Number	30293

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

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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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8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

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Electronic Patent Application Fee Transmittal					
Application Number:	17397040				
Filing Date:	09-Aug-2021				
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-9940-05				
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:					
Extension-of-Time:					

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 3 months with $0 paid	1253	1	1480	1480
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1360	1360
		Total in USD ($)		**2840**

Electronic Acknowledgement Receipt	
EFS ID:	48772276
Application Number:	17397040
International Application Number:	
Confirmation Number:	4409
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-9940-05
Receipt Date:	27-OCT-2023
Filing Date:	09-AUG-2021
Time Stamp:	14:52:17
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$2840
RAM confirmation Number	E20230QE52498395
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		9940-05-AMD02.pdf	81427 a1b9092f0547d85131d12cb2ccb5dc53cd4142fc	yes	15

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment Submitted/Entered with Filing of Continued Prosecution Application (CPA)/Request for Continued Examination(RCE)	1	1
	Claims	2	10
	Applicant Arguments/Remarks Made in an Amendment	11	15

Warnings:					
Information:					
2	Request for Continued Examination (RCE)	9940-05-RCE-.pdf	1349945 3a99042de13d5de001d0463e8ac6654501d8157b	no	3
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	40955 9eb4fb442c3606e898e747dc1116988e6237ec1b	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1472327		

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

Applicant : Maxell, Ltd.

Confirmation No.: 4409

Serial No. : 17/397,040

Filed : August 9, 2021

For : RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Group : 2484

Examiner : Mishawn N. HUNTER

Docket No. : ASA-9940-05

Customer No.: 24956

AMENDMENT AFTER FINAL REJECTION

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

October 27, 2022

Sir:

In response to the Office Action mailed April 27, 2023, please amend the above-identified patent application as follows. A fee for a 3-month Extension of Time accompanies this response.

Amendments to the Claims begin 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 listings, of claims in the application:

Listing of Claims:

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

a photographing sensor configured to photograph an object and generate image information to be stored in an internal recording medium or an external recording medium;

~~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 stored in the internal recording medium or the external recording medium~~recorded by the recorder~~;

processing circuitry configured to:

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

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

a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person;

firstly pick out image information which includes both the registered first specific person and the registered second specific person based on selection of thumbnail images being displayed simultaneously corresponding to each of the registered first specific person and the registered second specific person, the thumbnail images extracting and indicating face area of each of the registered first specific person and the registered second specific person,

secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and

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

2. (Previously presented) The recording and reproducing apparatus according to claim 1,

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.

3. (Previously presented) 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.

4. (Previously presented) The recording and reproducing apparatus according to claim 1,

wherein the recording medium further stores instructions that, when executed by the processing circuitry, cause the processing circuitry to execute the face-recognizing process on image information captured from an external camera not included in the recording and reproducing apparatus.

5. (Previously presented) The recording and reproducing apparatus according to claim 1, further comprising

a display,

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

6. (Previously presented) The recording and reproducing apparatus according to claim 5,

wherein the frame is a rectangular frame.

7. (Previously presented) The recording and reproducing apparatus according to claim 1,

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.

8. (Previously presented) The recording and reproducing apparatus according to claim 7,

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wherein the icon is displayed on the thumbnail.

9. (Previously presented) The recording and reproducing apparatus according to claim 1,

wherein the predetermined condition is set in accordance with an instruction by a user.

10. (Currently amended) A recording and reproducing method for recording and reproducing image information, comprising:

photographing, by a photographing sensor, an object and generating image information to be stored in an internal recording medium or an external recording medium;

~~recording, by a recorder, the image information generated by the photographing sensor in a recording medium;~~

reproducing, by a reproducer, the image information stored in the internal recording medium or the external recording medium~~recorded by the recorder~~;

executing, by processing circuitry, a face-recognizing process on the image information generated by the photographing sensor to detect a face;

registering, by processing circuitry, a person in the image information as a specific person, wherein a first person with a face is obtained by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, wherein a second person with a face is obtained by newly

photographing the second person in a photographing mode and thereafter registered as a second specific person;

firstly, selecting, by processing circuitry, image information which includes both the registered first specific person and the registered second specific person based on selection of thumbnail images being displayed simultaneously corresponding to each of the registered first specific person and the registered second specific person, the thumbnail images extracting and indicating face area of each of the registered first specific person and the registered second specific person,

secondly, selecting, by processing circuitry, the image information based on a predetermined condition from among the selected image information which includes both the registered first specific person and the registered second specific person, and

controlling, by processing circuitry, the reproducer to selectively and sequentially reproduce the image information selected based on the predetermined condition.

11. (Previously presented) The recording and reproducing method according to claim 10,

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.

12. (Previously presented) The recording and reproducing method according to claim 11,

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.

13. (Previously presented) The recording and reproducing method according to claim 10,

storing, in the recording medium, instructions that, when executed by the processing circuitry, cause the processing circuitry to execute the face-recognizing

process on image information captured from an external camera not included in the recording and reproducing apparatus.

14. (Previously presented) The recording and reproducing method according to claim 10,

in response to the face-recognizing process detecting that a face of a person is included in video information generated by the photographing sensor, displaying, by a display, the video information with a frame surrounding at least a portion of the face of the person.

15. (Previously presented) The recording and reproducing method according to claim 14,

wherein the frame is a rectangular frame.

16. (Previously presented) The recording and reproducing method according to claim 10,

generating, by the processing circuitry, 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.

17. (Previously presented) The recording and reproducing method according to claim 16,

wherein the icon is displayed on the thumbnail.

18. (Previously presented) The recording and reproducing method according to claim 10,

wherein the predetermined condition is set in accordance with an instruction by a user.

19. (New) The recording and reproducing apparatus according to claim 1,

wherein the thumbnail images are displayed side by side together with an other thumbnail indicating face region including a third face extracted from a third specific person included in the image information which is different from the first specific person and the second specific person.

20. (New) The recording and reproducing method according to claim 10,

wherein the thumbnail images are displayed side by side together with an other thumbnail indicating face region including a third face extracted from a third specific person included in the image information which is different from the first specific person and the second specific person.

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REMARKS

Claims 1-20 are pending in this application. Claims 1 and 10 have been amended. New claims 19 and 20 have been added. No new matter has been added.

Double Patenting Rejections

Claims 1, 3, 10 and 12 stand rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 6 of U.S. Patent No. 11,094,350. A Terminal Disclaimer is being submitted with this Reply to overcome the rejection, without admitting to its propriety.

Rejections Under 35 U.S.C. § 103

Claims 1, 4, 9, 10, 13 and 18 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tokuse (U.S. Pub. No. 2008/0199056) in view of Nakashima (U.S. Pub. No. 2007/0019083). Claims 5, 6, 14 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tokuse in view of Nakashima in further view of Saga (U.S. Pub. No. 2006/0210264).

Applicants request reconsideration of the rejections in view of the foregoing amendments and for the following reasons.

Claim 1, as amended, is directed to:

1. A recording and reproducing apparatus for recording and reproducing image information, comprising:
a photographing sensor configured to photograph an object and generate image information to be stored in an internal recording medium or an external recording medium;
a reproducer configured to reproduce the image information stored in the internal recording medium or the external recording medium;
processing circuitry configured to:
execute a face-recognizing process on the image information generated by the photographing sensor to detect a face;
register a person in the image information as a specific person, wherein a first person with a face is obtained by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person;
firstly pick out image information which includes both the registered first specific person and the registered second specific person based on selection of thumbnail images being displayed simultaneously corresponding to each of the registered first specific person and the registered second specific person, the thumbnail images extracting and indicating face area of each of the registered first specific person and the registered second specific person,
secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and
control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition.

Accordingly, claim 1 has been amended, in part, to clarify that the image information which is firstly picked out includes "both the registered first specific person and the registered second specific person <u>based on selection of thumbnail images being displayed simultaneously corresponding to each of the registered first</u>

specific person and the registered second specific person, the thumbnail images extracting and indicating face area of each of the registered first specific person and the registered second specific person." Accordingly, as shown in Fig. 7, by selecting a target thumbnail image from the thumbnail images of the registered person's face images that are displayed at the same time, an image that includes both the persons corresponding to the plurality of thumbnail images is extracted. Applicant has also amended claims 1 and 10 to set forth that the photographing, by a photographing sensor, photographs an object and generates image information to be stored in an internal recording medium or an external recording medium.

As acknowledged by the Examiner, Tokuse does not disclose the previously claimed language of

> execute a face recognizing process on the image information generated by the photographing sensor to detect a face; register a person in the image information as a specific person, wherein a first person with a face is obtain by newly photographing the first person in a photographing mode and thereafter registered as a first specific person, and wherein a second person with a face is obtained by newly photographing the second person in a photographing mode and thereafter registered as a second specific person; firstly pick out image information which includes both the registered first specific person and the registered second specific person, secondly pick out the image information based on a predetermined condition from among the picked-out image information which includes both the registered first specific person and the registered second specific person, and control the reproducer to selectively and sequentially reproduce the image information picked out based on the predetermined condition.

The Examiner attempts to rely upon Nakashima to cure this deficiency in Tokuse. Nakashima discloses, for example, the description of "by registering in

advance a facial image of each individual intended to be a subject." See paragraph [0057]. Accordingly, Nakashima discloses the concept of multiple face images but does not specifically disclose the limitations in the independent claims of firstly pick out image information which includes both the registered first specific person and the registered second specific person. Further, Nakashima does not disclose the limitation of firstly pick out image information "based on a selection of thumbnail images being displayed simultaneously corresponding to each of the registered first specific person and the registered second specific person, the thumbnail images extracting and indicating a face area of each of the registered first specific person and the registered second specific person," as claimed.

As such, it is submitted that claims 1 and 10, as well as the claims dependent thereon are patentable, whether or not further considered in view of Saga. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. §103 be withdrawn.

Allowable Subject Matter

The Examiner has objected to claims 2, 7, 8, 11, 16 and 17 as being dependent upon a rejected base claim, but indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Request for Continued Examination

Applicants submit a Request for Continued Examination to ensure entry and consideration of the foregoing amendments to the claims.

Conclusion

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

The Commissioner is authorized to charge any shortage in the fees due, or credit any overpayment, to Deposit Account No. 50-1417 (referencing Attorney Docket No. ASA-9940-05).

Respectfully submitted,

MATTINGLY & MALUR, PC

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

Doc Code: DIST.E.FILE **Document Description: Electronic Terminal Disclaimer - Filed**	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	17397040
Filing Date	09-Aug-2021
First Named Inventor	Mari YOSHIDA
Attorney Docket Number	ASA-9940-05
Title of Invention	RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
Maxell, Ltd.	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

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as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent later:
- expires for failure to pay a maintenance fee;
- is held unenforceable;
- is found invalid by a court of competent jurisdiction;
- is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○	I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

○ Small Entity

○ Micro Entity

◉ Regular Undiscounted

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 30293

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/John R. Mattingly/
Name	John R. Mattingly

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	17397040
Filing Date:	09-Aug-2021
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-9940-05

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 17397040

Filing Date: 09-Aug-2021

Applicant/Patent under Reexamination: YOSHIDA

Electronic Terminal Disclaimer filed on October 27, 2023

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt	
EFS ID:	48770376
Application Number:	17397040
International Application Number:	
Confirmation Number:	4409
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-9940-05
Receipt Date:	27-OCT-2023
Filing Date:	09-AUG-2021
Time Stamp:	14:54:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	$170
RAM confirmation Number	E20230QE54028523
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	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	41140 ab7f033a94a692b7ba2ccc0e378d33eee9090d55	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37814 29fa1c1baece9b6b35194d11e6e56343cd1ef706	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	78954		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

24956 7590 12/01/2023

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

EXAMINER
HUNTER, MISHAWN N

ART UNIT	PAPER NUMBER
2484	

DATE MAILED: 12/01/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

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	03/01/2024

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

For purposes of this notice, small entity fees are 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

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

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

IMPORTANT REMINDER: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

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 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

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

24956 7590 12/01/2023
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

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

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system 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.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

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	03/01/2024

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 _____
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)

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

❑ Electronic Payment via the USPTO patent electronic filing system ❑ 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

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.

❑ Applicant asserting small entity status. See 37 CFR 1.27

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.

❑ Applicant changing to regular undiscounted fee 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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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

24956 7590 12/01/2023

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

EXAMINER	
HUNTER, MISHAWN N	
ART UNIT	**PAPER NUMBER**
2484	

DATE MAILED: 12/01/2023

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.

PTOL-85 (Rev. 11/23)

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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. 17/397,040	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 RCE filed on 10/27/23.
   ☐ 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 1-20 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

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

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

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

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	Art Unit
	Mishawn N Hunter	2484

CPC - Searched*		
Symbol	**Date**	**Examiner**
G11B 27/34, 27/105, 27/28, 27/30	4/22/2022	MH
H04N 5/77, 5/772, 5/781, 5/85, 9/8042	4/22/2022	MH
G06F 16/745, 16/73	4/22/2022	MH
G06K 9/00	4/22/2022	MH
G06V 40/172, 20/40	4/22/2022	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.

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

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	Art Unit
	Mishawn N Hunter	2484

Search Notes		
Search Notes	**Date**	**Examiner**
performed PE2E search, see attached	4/22/2022	MH
performed CPC search (see above) further limited by text search in PE2E, see attached	4/22/2022	MH
performed NPL search using IP.com, see attached	4/22/2022	MH
updated PE2E search, see attached	4/22/2023	MH
updated CPC search (see above) further limited by text search in PE2E, see attached	4/22/2023	MH
updated PE2E search, see attached	11/17/2023	MH
updated CPC search (see above) further limited by text search in PE2E, see attached	11/17/2023	MH
performed interference search, see attached	11/17/2023	MH

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
G11B	27/34, 27/105, 27/28, 27/30	11/17/2023	MH
H04N	5/77, 5/772, 5/781, 5/85, 9/8042	11/17/2023	MH
G06F	16/745, 16/73	11/17/2023	MH
G06K	9/00	11/17/2023	MH
G06V	40/172, 20/40	11/17/2023	MH

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

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	2484

CPC						
Symbol					**Type**	**Version**
G11B	/	27	/	034	F	2013-01-01
G06F	/	16	/	745	I	2019-01-01
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
G06F	/	18	/	00	I	2023-01-01
G11B	/	27	/	30	I	2013-01-01
G11B	/	27	/	34	I	2013-01-01
G06F	/	16	/	73	I	2019-01-01
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)	20	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	17 November 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.: 20231117

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	2484

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G11B	/	27	/	034

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

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

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	17 November 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.: 20231117

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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	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	1	11	10	10	19										
2	2	12	11	20	20										
3	3	13	12												
4	4	14	13												
5	5	15	14												
6	6	16	15												
7	7	17	16												
8	8	18	17												
9	9	19	18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	20	
/MISHAWN N. HUNTER/ Primary Examiner, Art Unit 2484	17 November 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.: 20231117

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Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/397,040	YOSHIDA, Mari
	Examiner	**Art Unit**
	Mishawn N Hunter	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	04/22/2022	11/17/2023							
1	1	✓	=							
2	2	O	=							
3	3	✓	=							
4	4	✓	=							
5	5	✓	=							
6	6	✓	=							
7	7	O	=							
8	8	O	=							
9	9	✓	=							
11	10	✓	=							
12	11	O	=							
13	12	✓	=							
14	13	✓	=							
15	14	✓	=							
16	15	✓	=							
17	16	O	=							
18	17	O	=							
19	18	✓	=							
10	19		=							
20	20		=							

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L36	81289	(g11b27/34 g06f16/745 g06f16/73 g06v40/172 g06v20/40 g06k9/00 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	2023/11/17 07:53 AM
L37	9415	((face facial person) near2 recogni$) WITH (image photograph$) WITH (detect$ near2 (face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:53 AM
L38	917	L37 AND ((face facial person) near2 recogni$) WITH (register$ catalog$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:53 AM
L39	0	L38 AND (thumbnail WITH display$ WITH simultaneous$ WITH (person face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:54 AM
L41	13	L38 AND (display$ WITH simultaneous$ WITH (person face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:54 AM
L42	7	L41 AND @ad<"20080519"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:55 AM
L43	2	L38 AND (thumbnail WITH display$ WITH (second adj2 (person face facial)))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 07:57 AM
L44	26	L38 AND (image WITH display$ WITH simultaneous$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 08:21 AM
L45	9	L44 AND @ad<"20080519"	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 08:22 AM
L46	8	L38 AND (image WITH display$ WITH concurrent$)	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 08:24 AM
L47	322	L36 AND L38	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 04:44 PM
L48	3271	L37 AND (image WITH extract$ WITH (face facial))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 04:49 PM
L49	7	L37 AND (image WITH extract$ WITH (face facial) WITH (second adj2 person))	(US-PGPUB; USPAT; EPO; JPO)	OR	ON	ON	2023/11/17 04:51 PM

Maxell, Ltd.
Ex. 2036
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PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND object AND (face facial) AND (recogniz$ recognition) AND detect$ AND register$ AND person AND thumbnail AND simultaneous$ AND correspond$ AND extract$ AND (condition predetermined preset)).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM
N2	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial) AND (recogniz$ recognition) AND detect$ AND register$ AND person AND thumbnail AND simultaneous$ AND correspond$ AND extract$ AND (condition predetermined preset)).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM
N3	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial) AND (recogniz$ recognition) AND detect$ AND register$ AND person AND thumbnail AND simultaneous$ AND extract$ AND (condition predetermined preset)).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM
N4	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial) AND (recogniz$ recognition) AND detect$ AND register$	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM

Maxell, Ltd.
Ex. 2036
Page 233 of 254

		AND person AND thumbnail AND simultaneous$ AND extract$).clm.					
N5	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial) AND (recogniz$ recognition) AND register$ AND person AND thumbnail AND simultaneous$ AND extract$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM
N6	0	(record$ AND (reproduc$ play$4 replay$) AND image AND sensor AND (face facial) AND (recogniz$ recognition) AND register$ AND person AND thumbnail AND simultaneous$ AND extract$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:54 PM
N7	0	(record$ AND (reproduc$ play$4 replay$) AND image AND sensor AND (face facial person) AND (recogniz$ recognition) AND register$ AND thumbnail AND simultaneous$ AND extract$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM
N8	0	(record$ AND (reproduc$ play$4 replay$) AND image AND sensor AND (face facial person) AND (recogniz$ recognition) AND thumbnail AND simultaneous$ AND extract$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM
N9	3	(record$ AND (reproduc$ play$4 replay$) AND image AND sensor AND (face facial person) AND (recogniz$ recognition) AND simultaneous$ AND extract$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM
N10	17	(record$ AND (reproduc$ play$4 replay$) AND image AND sensor AND (face	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM

		facial person) AND (recogniz$ recognition) AND simultaneous$).clm.					
N11	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial) AND (recogniz$ recognition) AND detect$ AND register$ AND person AND thumbnail AND simultaneous$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM
N12	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial person) AND (recogniz$ recognition) AND detect$ AND register$ AND thumbnail AND simultaneous$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:55 PM
N13	0	(record$ AND (reproduc$ play$4 replay$) AND image AND photograph$ AND sensor AND (face facial person) AND (recogniz$ recognition) AND register$ AND thumbnail AND simultaneous$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:56 PM
N14	0	(record$ AND (reproduc$ play$4 replay$) AND (image photograph$) AND sensor AND (face facial person) AND (recogniz$ recognition) AND register$ AND thumbnail AND simultaneous$).clm.	(USPAT)	OR	ON	ON	2023/11/17 04:56 PM

Bibliographic Data

Application No: 17/397,040

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.
08/09/2021	386	2484	ASA-9940-05
RULE			

APPLICANTS

Maxell, Ltd., Kyoto, JAPAN

INVENTORS

Mari YOSHIDA, Yokohama, JAPAN

CONTINUING DATA

This application 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**

08/19/2021

STATE OR COUNTRY

JAPAN

ADDRESS

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

FILING FEE RECEIVED

$1,820

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.	: 17/397,040	Confirmation No.	: 4409
Inventor(s)	: Mari YOSHIDA	TC/GAU	: 2484
Filed	: August 9, 2021	Examiner	: MISHAWN N HUNTER
Title	: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
Docket No.	: ASA-9940-05		
Customer No.: 24956			

REQUEST FOR ACKNOWLEDGMENT OF PRIORITY UNDER 35 USC §119

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

December 6, 2023

Sir:

Following the Notice of Allowance mailed December 1, 2023, Applicant requests that the Notice of Allowability be corrected to acknowledge the certified priority document for the above-identified application; and that the Bibliographic Data Sheet be amended to set forth that foreign priority under 35 USC §119 has been claimed by applicants to JP 2008-130678 filed May 19, 2008, and that the 35 USC §119(a-d) conditions have been met.

Applicants note that foreign priority under 35 USC §119 was claimed in the Application Data Sheet filed on August 9, 2021, which is the filing date of the present application. The certified priority document was electronically retrieved and made of record in parent U.S. Application No. 14/478,020 file on September 16, 2014. Accordingly, correction of the record is respectfully requested.

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

Respectfully submitted,

MATTINGLY & MALUR, PC

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

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/397,040	**12/06/2023 03:04:09 PM Z ET**	**ASA-9940-05**

Title of Invention

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4409	FILED BY	Mariah Smith
PATENT CENTER #	63504235	FILING DATE	08/09/2021
CUSTOMER #	24956	FIRST NAMED INVENTOR	Mari YOSHIDA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Mattingly

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
9940-05_Req-Priority-Ack_20231206.pdf	2	Request for Corrected Notice of Allowance	17 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
9940-05_Req-Priority-Ack_20231206.pdf	2AC3AAF4F875D477B5569CB866ECF67F55881FAAC878A8BB07ADDC4DCD11B20FC4F7596D1D314B1B15807B37EC9E3A717CFF41E0A59B792A4E986E1D101BD5A0

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 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.	: 17/397,040	Confirmation No.	: 4409
Inventor(s)	: Mari YOSHIDA	TC/GAU	: 2484
Filed	: August 9, 2021	Examiner	: MISHAWN N HUNTER
Title	: RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF		
Docket No.	: ASA-9940-05		
Customer No.: 24956			

SECOND REQUEST FOR ACKNOWLEDGMENT OF PRIORITY UNDER 35 USC §119

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

February 23, 2024

Sir:

Following the Notice of Allowance mailed December 1, 2023, Applicant requests that the Notice of Allowability be corrected to acknowledge the certified priority document for the above-identified application; and that the Bibliographic Data Sheet be amended to set forth that foreign priority under 35 USC §119 has been claimed by applicants to JP 2008-130678 filed May 19, 2008, and that the 35 USC §119(a-d) conditions have been met.

Applicants note that foreign priority under 35 USC §119 was claimed in the Application Data Sheet filed on August 9, 2021, which is the filing date of the present application. The certified priority document was electronically retrieved and made of

record in parent U.S. Application No. 14/478,020 file on September 16, 2014.

Accordingly, correction of the record is respectfully requested.

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

Respectfully submitted,

MATTINGLY & MALUR, PC

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

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/397,040	**02/23/2024 01:07:34 PM Z ET**	**ASA-9940-05**

Title of Invention

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4409	FILED BY	Mariah Smith
PATENT CENTER #	64425478	FILING DATE	08/09/2021
CUSTOMER #	24956	FIRST NAMED INVENTOR	Mari YOSHIDA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Mattingly

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
9940-05_Second-Req-Priority-Ack_20240223.pdf	2	Request for Corrected Notice of Allowance	17 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
9940-05_Second-Req-Priority-Ack_20240223.pdf	AF119121A00664E148546F356CDC00D94C8D09AD94411E7C65E7BD244FF6E542466A2F42A7C2FEB223E22320A0586E39DBEC2AF40487C4BA454145D6F0D2AF35

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 filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

7590 02/27/2024

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

EXAMINER	
HUNTER, MISHAWN N	
ART UNIT	PAPER NUMBER
2484	
NOTIFICATION DATE	DELIVERY MODE
02/27/2024	ELECTRONIC

ACKNOWLEDGEMENT OF REQUEST

Notice of Allowance/Allowability Mailed

The request for a corrected notice of allowance/allowability, dated 12/06/2023, has been received by the U.S.Patent and Trademark Office. A corrected notice of allowance/allowability will not be mailed, but the Office has verified the following information, and made any necessary corrections to Office computer data:

- **Applicant claims "Foreign Priority" (benefit of an earlier Foreign application pursuant to 35 U.S.C. 119(a)-(d) or (f)).**

☐ Certified copies of the priority documents have been received.

☑ Certified copies of priority documents have been received in Application No. 14/478,020

TREVON COUCH

For 571-272-4200 or 1-888-786-0101
Application Assistance Unit
Office of Data Management

FORM PTOM327-F (Rev. 02/08)

Maxell, Ltd.
Ex. 2036
Page 245 of 254

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC PAYMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/397,040	**02/29/2024 10:28:54 AM Z ET**	**ASA-9940-05**

Title of Invention

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4409	FILED BY	Krista Hargrove
PATENT CENTER #	64494008	AUTHORIZED BY	John Mattingly
CUSTOMER #	24956	FILING DATE	08/09/2021
CORRESPONDENCE ADDRESS	-	FIRST NAMED INVENTOR	Mari YOSHIDA

Payment Information

PAYMENT METHOD	PAYMENT TRANSACTION ID	PAYMENT AUTHORIZED BY
CARD / 1019	**E20242SA30119503**	**Krista Hargrove**

PRE-AUTHORIZED ACCOUNT	PRE-AUTHORIZED CATEGORY
501417	**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)**

FEE CODE	DESCRIPTION	ITEM PRICE($)	QUANTITY	ITEM TOTAL($)
1501	UTILITY ISSUE FEE	1200.00	1	1200.00
			TOTAL AMOUNT:	**$1,200.00**

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 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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via the USPTO patent electronic filing system.

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 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. **Because electronic patent issuance may occur shortly after issue fee payment, any desired continuing application should preferably be filed prior to payment of this issue fee in order not to jeopardize copendency.**

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

24956 7590 12/01/2023
MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
SUITE 210
ALEXANDRIA, VA 22314

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

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being transmitted to the USPTO via the USPTO patent electronic filing system 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.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

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	03/01/2024

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
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: Maxell, Ltd.
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Kyoto, Japan

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

4a. Fees submitted: ☒ Issue Fee ☐ Publication Fee (if required)

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

☒ Electronic Payment via the USPTO patent electronic filing system ☐ 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. 501417

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

☐ Applicant certifying micro entity status. See 37 CFR 1.29

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.

☐ Applicant asserting small entity status. See 37 CFR 1.27

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.

☐ Applicant changing to regular undiscounted fee status.

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

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

Authorized Signature /John R. Mattingly/ Date February 29, 2024

Typed or printed name John R. Mattingly Registration No. 30293

PTOL-85 Part B (11/23) Approved for use through 03/31/2026 OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Maxell, Ltd.
Ex. 2036
Page 248 of 254

UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #	RECEIPT DATE / TIME	ATTORNEY DOCKET #
17/397,040	**02/29/2024 10:28:54 AM Z ET**	**ASA-9940-05**

Title of Invention

RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	-
CONFIRMATION #	4409	FILED BY	Krista Hargrove
PATENT CENTER #	64494008	FILING DATE	08/09/2021
CUSTOMER #	24956	FIRST NAMED INVENTOR	Mari YOSHIDA
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Mattingly

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
9940-05_issuefeetransmittal.pdf	1	Issue Fee Payment (PTO-85B)	127 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
9940-05_issuefeetransmittal.pdf	D54E50B1892BF8118308901B020F4DF24B15409FFDE1588152 92113D7DD7037E5E01A24F8414B60DA89C006ADC8FBF0C1A 9A33ADE09B9EB88959E6D4B8125514

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	04/02/2024	11948605	ASA-9940-05	4409

24956 7590 03/13/2024

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.

The USPTO is implementing electronic patent issuance with a transition period, during which period the USPTO will mail a ceremonial paper copy of the electronic patent grant to the correspondence address of record. Additional copies of the patent (i.e., certified and presentation copies) may be ordered for a fee from the USPTO's Certified Copy Center at https://certifiedcopycenter.uspto.gov/index.html. The Certified Copy Center may be reached at (800)972-6382.

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 Center (https://patentcenter.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 PATENT CENTER site https://patentcenter.uspto.gov for additional inventors):

Mari YOSHIDA, Yokohama, JAPAN;

APPLICANT(s) (Please see PATENT CENTER site https://patentcenter.uspto.gov for additional applicants):

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/397,040	08/09/2021	Mari YOSHIDA	ASA-9940-05	4409

24956 7590 04/02/2024

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EXAMINER
HUNTER, MISHAWN N

ART UNIT	PAPER NUMBER
2484	

NOTIFICATION DATE	DELIVERY MODE
04/02/2024	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

APPLICATION NO.	ISSUE DATE	PATENT NO.
17/397,040	02-Apr-2024	11948605

MATTINGLY & MALUR, PC
1800 DIAGONAL ROAD
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EGRANT NOTIFICATION

Your electronic patent grant (eGrant) is now available, which can be accessed via Patent Center at https://patentcenter.uspto.gov

The electronic patent grant is the official patent grant under 35 U.S.C. 153. For more information, please visit https://www.uspto.gov/electronicgrants