UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 11,244,675 B2
APPLICATION NO. : 16/295034
DATED : February 8, 2022
INVENTOR(S) : Naganuma

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Claims

In Column 21, Line 17, in Claim 1; in Column 22, Line 25, in Claim 6; in Column 22, Line 47, in Claim 7:
It should read ..."when the voice is determined to be the second voice,"

Signed and Sealed this
Twenty-first Day of May, 2024

Katherine Kelly Vidal

Katherine Kelly Vidal
Director of the United States Patent and Trademark Office

Amazon v. SoundClear
US Patent 11,244,675
Amazon Ex. 1007

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
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	03/07/2019	Tatsumi Naganuma	SAJVP172US	1688

23623 7590 04/29/2024
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
04/29/2024	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):

docket@thepatentattorneys.com
hmckee@thepatentattorneys.com
rveri@thepatentattorneys.com

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, VA 22313-1450
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Patent No.: 11244675
Issue Date: 02/08/2022
Appl. No.: 16/295,034
Filed: 03/07/2019

PART (A) RESPONSE FOR CERTIFICATES OF CORRECTION

This is a decision on the Certificate of Correction request filed 15 April 2024.

The request for issuance of Certificate of Correction for the above-identified correction(s) under the provisions of 37 CFR 1.322 and/or 1.323 is hereby:

(Check one)
☑ Approved ☐ Approved in Part ☐ Denied

Comments: ____

PART (B) PETITION UNDER 37 CFR 1.324 OR 37 CFR 1.48

☐ This is a decision on the petition filed ____ to correct inventorship under 37 CFR 1.324.

☐ This is a decision on the request under 37 CFR 1.48, petition filed ____. In view of the fact that the patent has already issued, the request under 37 CFR 1.48 has been treated as a petition to correct inventorship under 37 CFR 1.324.

The petition is hereby: ☐ Granted ☐ Dismissed

Comment: ____

The patented filed is being forwarded to Certificate of Corrections Branch for issuance of a certificate naming only the actual inventor or inventors.

/RICHEMOND DORVIL/
Supervisory Patent Examiner, Art Unit 2658
Technology Center 2600
Phone: (571)272-7602

Certificates of Correction Branch email: CustomerServiceCoC@uspto.gov CoC Central Phone Number: (703) 756-1814

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being submitted *via* the USPTO EFS Filing System on the date shown below to Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: April 15, 2024 /Michelle Folger/
Michelle Folger

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:			
Inventor(s):	Naganuma	Examiner:	Martin Lerner
Serial No:	16/295,034	Art Unit:	2657
Issue Date:	February 8, 2022	Patent No:	11,244,675

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT

Dear Sir:

It is noted that an error appears in this patent of a clerical nature or character as more fully described below and it is believed such error occurred in good faith and correction thereof does not involve such changes in the patent as would constitute new matter or would require reexamination. Accordingly, a Certificate of Correction is respectfully requested.

Attached hereto, is form PTO/SB/44 with at least one copy copy being suitable for printing.

The error occurs on page 19 of the patent, in columns 21 and 22 – this error and the correction thereof is detailed in the attached form PTO/SB/44.

The error is believed to have been made by the Applicant.

The required fee of $160 is being submitted herewith. If there are any additional fees they can be charged to Deposit Account No. 50-1063. Any overpayment can be credited to Deposit Account No. 50-1063.

Please send the Certificate to:

Name: Gregory Turocy

Address: AMIN, TUROCY & WATSON, LLP
200 Park Avenue, Suite 300
Beachwood, Ohio 44122

Respectfully submitted,

AMIN, TUROCY & WATSON, LLP

/Greg Turocy/
Gregory Turocy
Reg. No. 36,952

AMIN, TUROCY & WATSON, LLP
200 Park Avenue, Suite 300
Beachwood, OH 44122
Telephone (216) 696-8730
Facsimile (216) 696-8731

PTO/SB/44 (09-07)
Approved for use through 08/31/2013. OMB 0651-0033
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.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 11,244,675

APPLICATION NO.: 16/295,034

ISSUE DATE : February 8, 2022

INVENTOR(S) : Naganuma

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

The errors occur on page 19 of the patent - in column 21, line 17, in claim 1; in column 22, line 25, in claim 6; in column 22, line 47, in claim 7:

It should read ..."when the voice is determined to be the second voice,"

MAILING ADDRESS OF SENDER (Please do not use customer number below):

200 Park Avenue, Suite 300
Beachwood, Ohio 44122

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. 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 1.0 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: Attention Certificate of Corrections Branch, 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.

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
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www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	02/08/2022	11244675	SAJVP172US	1688

23623 7590 01/19/2022
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 152 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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

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

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

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

Tatsumi Naganuma, Yokohama-shi, JAPAN;

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

JVC KENWOOD Corporation, Yokohama-shi, JAPAN;

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

IR103 (Rev. 10/09)

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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Address: COMMISSIONER FOR PATENTS
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Alexandria, Virginia 22313-1450
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	03/07/2019	Tatsumi Naganuma	SAJVP172US	1688

23623 7590 01/07/2022
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
01/07/2022	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):

docket@thepatentattorneys.com
hmckee@thepatentattorneys.com
rveri@thepatentattorneys.com

PTOL-90A (Rev. 04/07)

Response to Rule 312 Communication	Application No.	Applicant(s)	
	16/295,034	Naganuma, Tatsumi	
	Examiner	**Art Unit**	**AIA (FITF) Status**
	MARTIN LERNER	2657	Yes

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

1. ☑ The amendment filed on 02 December 2021 under 37 CFR 1.312 has been considered, and has been:

a) ☐ entered.

b) ☑ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

/MARTIN LERNER/
Primary Examiner, Art Unit 2657

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being submitted *via* the USPTO EFS Filing System on the date shown below to Mail Stop Issue Fee, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: Dec 2, 2021 /Rebecca A. Veri/
Rebecca A. Veri

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:			
Inventor(s):	Tatsumi Naganuma	Examiner:	Martin Lerner
Serial No:	16/295,034	Art Unit:	2657
Filing Date:	March 7, 2019	Conf. No:	1688

OK TO ENTER: /M.L/
01/03/2022

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RULE 312 AMENDMENT

Dear Examiner Lerner:

This paper is filed in response to the Notice of Allowance dated September 9, 2021. Kindly enter the following amendments.

Document Description: Issue Fee Payment (PTO-85B)

Issue Fee Transmittal Form

Application Number	Filing Date	First Named Inventor	Atty. Docket No.	Confirmation No.
16295034	07-Mar-2019	Tatsumi Naganuma	SAJVP172US	1688

TITLE OF INVENTION :

WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Entity Status	Application Type	Art Unit	Class - Subclass	EXAMINER
Regular Undiscounted	Utility under 35 USC 111(a)	2657	257000	

Issue Fee Due	Publication Due	Total Fee(s) Due	Date Due	Prev. Paid Fee
$1200	$0	$1200	09-Dec-2021	$0

1.Change of Correspondence Address and/or Indication Of Fee Address (37 CFR 1.33 & 1.363)

Current Correspondence Address:	Current Indicated Fee Address :
23623 AMIN, TUROCY & WATSON, LLP 200 Park Avenue Suite 300 Beachwood OH 44122 UNITED STATES 216-696-8730 docket@thepatentattorneys.com	
☐ Change of correspondence address requested, system generated AIA/122-EFS form attached	☐ Fee Address indication requested, system generated SB/47-EFS form attached

2.Entity Status

Change in Entity Status

○ Applicant certifying micro entity status; system generated Micro Entity certification form attached. See 37 CFR 1.29.
Note: Absent a valid certification of micro entity status, issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment. If this box is checked, you will be prompted to choose a micro entity status on the gross income basis (37 CFR 1.29(a)) or the institution of higher education basis (37 CFR 1.29(d)), and make the applicable certification online.

○ 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.

Document Description: Issue Fee Payment (PTO-85B)

3.The Following Fee(s) Are Submitted:

☒ Issue Fee	☐ I authorize USPTO to apply my previously paid issue fee to the current fees due
☐ Publication Fee	☐ The Director is hereby authorized to apply my previously paid issue fee to the current fee due and to charge deficient fees to Deposit Account Number _____
☐ Advance Order - # of copies _____	☒ If i**n addition to** the payment of the issue fee amount submitted with this form, there are any discrepancies in any amount(s) due, the Director is authorized to charge any deficiency, or credit any overpayment, to Deposit Account Number 50-1063 . The **issue fee must be submitted** with this form. **If payment of the issue fee does not accompany this form, checking this box and providing a deposit account number will NOT be effective to satisfy full payment of the fee(s) due.**

4.Firm and/or Attorney Names To Be Printed

NOTE: If no name is listed, no name will be printed
For printing on the patent front page, list to be displayed as entered

1. AMIN, TUROCY & WATSON, LLP
2.
3.

5.Assignee Name(s) and Residence Data To Be Printed

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

Name	City	State	Country	Category
JVCKENWOOD Corporation	Yokohama-Shi		JAPAN	corporation

6.Signature

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 has filed and has been granted power of attorney in this application. I also certify that this Fee(s) Transmittal form is being transmitted to the USPTO via EFS-WEB on the date indicated below.

Signature	/Greg Turocy/	**Date**	12-03-2021
Name	Gregory Turocy	**Registration Number**	36952

CERTIFICATE OF TRANSMISSION

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Date: Dec 2, 2021 /Rebecca A. Veri/
Rebecca A. Veri

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:			
Inventor(s):	Tatsumi Naganuma	Examiner:	Martin Lerner
Serial No:	16/295,034	Art Unit:	2657
Filing Date:	March 7, 2019	Conf. No:	1688

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RULE 312 AMENDMENT

Dear Examiner Lerner:

This paper is filed in response to the Notice of Allowance dated September 9, 2021. Kindly enter the following 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) An output-content control device comprising:

a voice acquiring unit configured to acquire a voice spoken by a user;

a voice classifying unit configured to calculate a distance between the user and the output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance;

an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user;

a notification-information acquiring unit configured to acquire notification information which includes content information as a content information to be notified to the user based on the intention information; <u>and</u>

an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein the output-content generating unit is further configured to generate, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word, and to generate, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information.

2. (previously presented) The output-content control device according to claim 1, wherein

the notification information includes type information indicating a type of the content information, and

the output-content generating unit is further configured to select, on generating the first output sentence, at least one word to be placed with the other word based on a word included in the content information and the type information that is associated with the content information.

3. (previously presented) The output-content control device according to claim 2, wherein

the output-content generating unit is further configured to read, on generating the first output sentence, relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification information with the second word when the word included in the notification information matches with the first word.

4. (previously presented) The output-content control device according to claim 3, wherein

the relationship information further includes information of type information indicating a type of the first word, and

the output-content generating unit is further configured to select, on generating the first output sentence, a word included in the notification information as word to be replaced with another word when the type information of the word included in the notification information matches with the type information of the first word and the word included in the notification information matches with the first word.

5. (Original) The output-content control device according to claim 1, wherein

the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper.

6. (previously presented) An output-content control method comprising:

acquiring a voice spoken by a user;

calculating a distance between the user and an output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information which includes content information as a content of information to be notified to the user based on the intention information; and

generating, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word; and

generating, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information.

7. (currently amended) A non-transitory storage medium that stores an output-content control program that causes a computer to execute:

acquiring a voice spoken by a user;

calculating a distance between the user and [[a]] an output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information which includes content information as a content of information to be notified to the user based on the intention information; and

generating, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word; and

generating, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information.

REMARKS

Claims 1-7 are pending in the subject application upon entry of the amendments. A listing of the claims can be found on pages 2-6 of this Reply. Favorable reconsideration is respectfully requested in view of the amendments and following comments.

The Amendments

Claims 1 and 7 are amended to correct clerical errors. The amendment does NOT change the scope of claim 1 or claim 7. Support for the amendments can be located, for example, in the specification as filed. No new matter is added with such amendments.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SAJVP172US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact inventor's undersigned representative at the telephone number below.

Respectfully submitted,

AMIN, TUROCY & WATSON, LLP

/Greg Turocy/

Gregory Turocy
Reg. No. 36,952

200 Park Avenue, Suite 300
Beachwood, OH 44122
Telephone (216) 696-8730
Facsimile (216) 696-8731

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	03/07/2019	Tatsumi Naganuma	SAJVP172US	1688

23623 7590 10/07/2021
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2657	

NOTIFICATION DATE	DELIVERY MODE
10/07/2021	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):

docket@thepatentattorneys.com
hmckee@thepatentattorneys.com
rveri@thepatentattorneys.com

PTOL-90A (Rev. 04/07)

SUPPLEMENTAL ***Notice of Allowability***	**Application No.** 16/295,034	**Applicant(s)** Naganuma, Tatsumi	
	Examiner MARTIN LERNER	**Art Unit** 2657	**AIA (FITF) Status** Yes

-- 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 Information Disclosure Statement filed 20 September 2021.
   ☐ 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 1-7 . 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 _____.

/MARTIN LERNER/
Primary Examiner, Art Unit 2657

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	16295034
Filing Date	2019-03-07
First Named Inventor	Naganuma
Art Unit	2657
Examiner Name	Martin Lerner
Attorney Docket Number	SAJVP172US

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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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2016/136062	WO		2016-09-01	SONY CORP		

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

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16295034
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	2657
	Examiner Name	Martin Lerner
	Attorney Docket Number	SAJVP172US

	1	

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

EXAMINER SIGNATURE

Examiner Signature	/MARTIN LERNER/	Date Considered	09/30/2021

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

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

EFS Web 2.1.17

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

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	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	2657
	Examiner Name	Martin Lerner
	Attorney Docket Number	SAJVP172US

CERTIFICATION STATEMENT

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

X 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).

X See attached certification statement.

X Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

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	/Greg Turocy/	Date (YYYY-MM-DD)	2021-09-20
Name/Print	Gregory Turocy	Registration Number	36952

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.**

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

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 record s.

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

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

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

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

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

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

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

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

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

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Approved for use through 07/31/2012. OMB 0651-0031
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	Application Number	16295034
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	2657
	Examiner Name	Martin Lerner
	Attorney Docket Number	SAJVP172US

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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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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	16295034
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EXAMINER SIGNATURE

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

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X Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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Signature	/Greg Turocy/	Date (YYYY-MM-DD)	2021-09-20
Name/Print	Gregory Turocy	Registration Number	36952

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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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UNITED STATES PATENT AND TRADEMARK OFFICE

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

23623 7590 09/09/2021
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
2657	

DATE MAILED: 09/09/2021

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	03/07/2019	Tatsumi Naganuma	SAJVP172US	1688

TITLE OF INVENTION: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

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	12/09/2021

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

IMPORTANT REMINDER: 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.

PART B - FEE(S) TRANSMITTAL

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

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

By fax, send to: (571)-273-2885

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

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

23623 7590 09/09/2021
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

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

(Typed or printed name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/295,034	03/07/2019	Tatsumi Naganuma	SAJVP172US	1688

TITLE OF INVENTION: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

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	12/09/2021

EXAMINER	ART UNIT	CLASS-SUBCLASS
LERNER, MARTIN	2657	704-257000

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

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-09 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) ❑Advance Order - # of Copies _____

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

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

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

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

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
LERNER, MARTIN

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2657	

DATE MAILED: 09/09/2021

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

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

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

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

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

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

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 16/295,034	Applicant(s) Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	AIA (FITF) Status Yes

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

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

1. ☑ This communication is responsive to Amendment and Request for Continued Examination filed 22 June 2021.
   ☐ 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 1-7 . 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 _____.

/MARTIN LERNER/
Primary Examiner, Art Unit 2657

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

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

Independent claims 1 and 6 to 7 are allowable because the prior art of record does not disclose or reasonably suggest a device, method, and computer program for output-content control comprising acquiring a voice spoken by a user, calculating a distance between the user and an output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance, analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user, acquiring notification information which includes content information as a content of information which includes content information as a content of information to be notified to the user based on the intention information, generating, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word, and generating, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information.

Generally, the prior art of record does not disclose or reasonably suggest a proximity sensor for calculating a distance between a user and a control device to classify a voice into either a first voice or a second voice based on the calculated distance. Proximity sensors are commonly known in speech recognition to determine if a user is within a predetermined distance to a control device, but not to classify a voice into a first voice or a second voice based on a distance. *Tseretopoulos et al.* (U.S.

Patent Publication 2019/0103127) discloses classifying a voice into a first voice or a second voice according to a personality type, and replacing words with synonyms according to a personality type. However, *Tseretopoulos et al.* does not disclose a proximity sensor.

The Specification, ¶[0035], describes an embodiment of a proximity sensor that can determine a distance between a user and a control device, where the distance can be used as a feature value to classify a voice as a first voice V1A or a second voice V1B.

The Specification, ¶[0004], states an objective of making a content of a notification in response to an inquiry from a user difficult to be understood by people other than a user when the response may be heard by other people but it is not wished to be known by people other than the user.

Naganuma (U.S. Patent Publication 2019/0279611) is a co-pending application, but corresponding pending claims are not sufficiently similar to require an obviousness double patenting rejection.

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

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN LERNER whose telephone number is (571) 272-7608. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Washburn can be reached on (571) 272-5551. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/MARTIN LERNER/
Primary Examiner
Art Unit 2657
August 31, 2021

Notice of References Cited	Application/Control No. 16/295,034	Applicant(s)/Patent Under Reexamination Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	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-20190279611-A1	09-2019	Naganuma; Tatsumi	G10L15/22	---
*	B	US-20140330560-A1	11-2014	Venkatesha; Sharath	G10L15/22	704/275
*	C	US-20150332674-A1	11-2015	NISHINO; Yohei	G10L17/00	704/246
*	D	US-20170025121-A1	01-2017	Tang; Weidong	G10L17/06	---
*	E	US-20170351487-A1	12-2017	AVILES-CASCO VAQUERO; Carlos	G10L17/00	---
*	F	US-10733989-B2	08-2020	Yehuday; Uri	G10L15/22	---
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/295,034	Naganuma, Tatsumi
	Examiner	**Art Unit**
	MARTIN LERNER	2657

CPC						
Symbol					**Type**	**Version**
G10L	/	15	/	22	F	2013-01-01
G10L	/	15	/	1815	I	2013-01-01
G06F	/	3	/	167	I	2013-01-01
G10L	/	2015	/	223	A	2013-01-01
G10L	/	25	/	51	A	2013-01-01

CPC Combination Sets								
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE (Assistant Examiner) (Date)		**Total Claims Allowed:** 7	
/MARTIN LERNER/ Primary Examiner, Art Unit 2657 (Primary Examiner) (Date)	31 August 2021	O.G. Print Claim(s) 6	O.G. Print Figure 7

U.S. Patent and Trademark Office Part of Paper No.: 20210628

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/295,034	Naganuma, Tatsumi
	Examiner	**Art Unit**
	MARTIN LERNER	2657

INTERNATIONAL CLASSIFICATION				
CLAIMED				
G10L	/	2015	/	226
G10L	/	17	/	06
G06F	/	40	/	247

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**
704	246

CROSS REFERENCES(S)							
CLASS	**SUBCLASS (ONE SUBCLASS PER BLOCK)**						
704	238	275					

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 7	
/MARTIN LERNER/ Primary Examiner, Art Unit 2657 (Primary Examiner)	31 August 2021 (Date)	O.G. Print Claim(s) 6	O.G. Print Figure 7

U.S. Patent and Trademark Office

Part of Paper No.: 20210628

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	16/295,034	Naganuma, Tatsumi
	Examiner	**Art Unit**
	MARTIN LERNER	2657

☑ 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														
2	2														
3	3														
4	4														
5	5														
6	6														
7	7														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 7	
/MARTIN LERNER/ Primary Examiner, Art Unit 2657 (Primary Examiner)	31 August 2021 (Date)	O.G. Print Claim(s) 6	O.G. Print Figure 7

U.S. Patent and Trademark Office Part of Paper No.: 20210628

Bibliographic Data

Application No: 16/295,034

Foreign Priority claimed: ◉ Yes ○ No

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

Verified and Acknowledged: /MARTIN LERNER/ (Examiner's Signature) | Initials

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
03/07/2019	704	2657	SAJVP172US
RULE			

APPLICANTS

JVC KENWOOD Corporation, Yokohama-shi, JAPAN

INVENTORS

Tatsumi Naganuma, Yokohama-shi, JAPAN

CONTINUING DATA

FOREIGN APPLICATIONS

JAPAN JP2018-044598 03/12/2018

IF REQUIRED, FOREIGN LICENSE GRANTED**

03/21/2019

STATE OR COUNTRY

JAPAN

ADDRESS

AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122
UNITED STATES

FILING FEE RECEIVED

$1,720

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. 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.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	16/295,034	Filing Date	2019-03-07	Docket Number (if applicable)	SAJVP172US	Art Unit	2657
First Named Inventor	Tatsumi Naganuma			Examiner Name	Martin Lerner		

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, to any international application that does not comply with the requirements of 35 U.S.C. 371, 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 RCE Submission

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 501063

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

X Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. 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	/Greg Turocy/	Date (YYYY-MM-DD)	2021-06-22
Name	Gregory Turocy	Registration Number	36952

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.

Privacy Act Statement

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

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

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

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

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

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

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

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

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

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

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being submitted *via* the USPTO EFS Filing System on the date shown below to Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: June 22, 2021 /Bailey Zugan Rayl/
Bailey Zugan Rayl

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:			
Inventor(s):	Tatsumi Naganuma	Examiner:	Martin Lerner
Serial No:	16/295,034	Art Unit:	2657
Filing Date:	March 7, 2019	Conf. No:	1688

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RCE SUBMISSION

Dear Examiner Lerner:

This paper is filed in response to the Final Office Action dated March 23, 2021. A RCE request accompanies this submission. Kindly enter the following 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) An output-content control device comprising:

a voice acquiring unit configured to acquire a voice spoken by a user;

a voice classifying unit configured to calculate a distance between the user and the output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance ~~analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice~~;

an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user;

a notification-information acquiring unit configured to acquire notification information which includes content information as a content information to be notified to the user based on the intention information;

an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein the output-content generating unit is further configured to generate, when the voice is determined to be the ~~predetermined~~ first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word, and to generate, when the voice is not determined to be the ~~predetermined~~ second voice, a second output sentence which includes all of the intention information and the content information ~~in which at least one word selected among words included in the notification information is not replaced with another word; and~~

~~an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit~~.

2. (Currently Amended) The output-content control device according to claim 1, wherein

~~the notification-information acquiring unit is further configured to acquire, as~~ the notification information~~, content information to be notified to the user and~~ includes type information indicating a type of the content information, and

the output-content generating unit is further configured to select, on generating the first output sentence, [[the]] at least one word to be placed with the other word ~~among the words included in the notification information~~ based on a word included in the content information and the type information that is associated with the content information.

3. (Currently Amended) The output-content control device according to claim 2, wherein

the output-content generating unit is further configured to read, on generating the first output sentence, relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification information with the second word ~~to generate the first output sentence~~ when the word included in the notification information matches with the first word.

4. (Currently Amended) The output-content control device according to claim 3, wherein

the relationship information further includes information of type information indicating a type of the first word, and

the output-content generating unit is further configured to select, on generating the first output sentence, a word included in the notification information as word to be replaced with another word ~~the at least one word among the words included in the notification information~~ when the type information of the word included in the notification information matches with the type information of the first word and the word included in the notification information matches with the first word.

5. (Original) The output-content control device according to claim 1, wherein the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper.

6. (Currently Amended) An output-content control method comprising:

acquiring a voice spoken by a user;

calculating a distance between the user and an output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance;

~~analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;~~

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information which includes content information as a content of information to be notified to the user based on the intention information; and

generating, when the voice is determined to be the ~~predetermined~~ first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word; and

generating, when the voice is not determined to be the ~~predetermined~~ second voice, a second output sentence which includes all of the intention information and the content information ~~in which at least one word selected among words included in the notification information is not replaced with another word; and~~

~~outputting the first output sentence as text data to a first output unit and outputting the second output sentence as voice data to a second output unit~~.

7. (Currently Amended) A non-transitory storage medium that stores an output-content control program that causes a computer to execute:

acquiring a voice spoken by a user;

calculating a distance between the user and a output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance;

~~analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;~~

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information which includes content information as a content of information to be notified to the user based on the intention information; and

generating, when the voice is determined to be the ~~predetermined~~ first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word; and

generating, when the voice is not determined to be the ~~predetermined~~ second voice, a second output sentence which includes all of the intention information and the content information ~~in which at least one word selected among words included in the notification information is not replaced with another word; and~~

~~outputting the first output sentence as text data to a first output unit and outputting the second output sentence as voice data to a second output units~~.

REMARKS

Claims 1-7 are pending in the subject application upon entry of the amendments. A listing of the claims can be found on pages 2-6 of this Reply. Favorable reconsideration is respectfully requested in view of the amendments and following comments.

The Amendments

Claims 1-4 and 6-7 are amended to refine claim elements and to disclaim the cited documents. Support for the amendments can be located, for example, at paragraphs [0039], [0043], and [0047] of the specification as filed. No new matter is added with such amendments.

The Written Description Rejection

Claims 1-7 stand rejected under 35 U.S.C. § 112(a) or 35 U.S.C. § 112 (pre-AIA), first paragraph. This rejection should be withdrawn for at least the following reason. The subject claims are amended to better comport with the specification. In particular, claims 1-7 are variously amended to reasonably convey to those skilled in the art that applicant had possession of the claim subject matter at the time the application was filed. Accordingly, withdrawal of this rejection is requested.

The First Obviousness Rejection

Claims 1, 3, and 6-7 stand rejected under 35 U.S.C. § 103 in view of Tseretopoulous et al. (US 2019/0103127) and Subramanian et al. (US 2011/0184721). Withdrawal of this rejection is requested for at least the following reason. The combination of Tseretopoulous et al. and Subramanian et al. fails to teach or suggest each and every element recited in the subject claims.

Independent claims 1, 6, and 7 recite similar elements, namely: "voice classifying unit configured to calculate a distance between the user and the output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance; an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information

indicating what kind of information is wished to be acquired by the user; a notification-information acquiring unit configured to acquire notification information which includes content information as a content information to be notified to the user based on the intention information; an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein the output-content generating unit is further configured to generate, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word, and to generate, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information," as recited in independent claim 1, and similarly recited in independent claims 6 and 7. Tseretopoulous et al. and Subramanian et al. fail to teach or suggest at least these elements as recited in the subject claims.

Tseretopoulous et al. discloses systems, software, and computer implemented methods for personalizing interactions within a conversational interface based on an input context. One example system performs operations including receiving a conversational input received via a conversational interface. The conversational input is analyzed to determine an intent and lexical personality score based on the input's characteristics. A set of responsive content is determined and includes a set of initial tokens representing an initial response. A set of synonym tokens associated with at least some of the initial tokens are identified, and at least one synonym token associated with a similar lexical personality score to the input is determined. At least one of the initial tokens are replaced with the determined synonym token to generate a modified version of the set of response content. The modified version of the response is then transmitted to a device in response to the input. See e.g., Abstract.

Subramanian et al. discloses a computer program product for communicating across channels with emotion preservation includes a computer usable storage medium having computer useable program code embodied therewith, the computer usable program code including: computer usable program code to receive a first language communication comprising text marked up with emotion metadata; computer usable

program code to translate the emotion metadata into second language emotion metadata; computer usable program code to translate the text to second language text; computer usable program code to analyze the second language emotion metadata for second language emotion information; and computer usable program code to combine the second language emotion information in first language communication with the second language text. See e.g., Abstract.

Neither Tseretopoulous et al. nor Subramanian et al. disclose, teach, or suggest: voice classifying unit configured to calculate a distance between the user and the output-content control device by a proximity sensor to classify the voice into either a first voice or a second voice based on the calculated distance; an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user; a notification-information acquiring unit configured to acquire notification information which includes content information as a content information to be notified to the user based on the intention information; an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein the output-content generating unit is further configured to generate, when the voice is determined to be the first voice, a first output sentence in which at least one word selected among words included in the content information of the notification information is replaced with another word, and to generate, when the voice is not determined to be the second voice, a second output sentence which includes all of the intention information and the content information, as recited in independent claim 1, and similarly recited in independent claims 6 and 7.

Accordingly, in view of at least the foregoing it is evident that independent claims 1, 6, and 7 patentably distinguish over the combination of Tseretopoulous et al. and Subramanian et al. as the purported combination of documents fails to disclose, teach, or suggest all elements recited in the independent claims (and claims that depend there from). Accordingly, withdrawal of this rejection is respectfully requested.

The Second Obviousness Rejection

Claims 2 and 4 stand rejected under 35 U.S.C. § 103 in view of Tseretopoulous et al., Subramanian et al., and Aoyama et al. (US 2017/0337921). This rejection should be withdrawn for at least the following reason. Claims 2 and 4 depend from independent claim 1 and the Aoyama et al. does not make up for the aforementioned deficiencies with regard to the combination of Tseretopoulous et al. and Subramanian et al. in the context of independent claim 1. Accordingly, withdrawal of this rejection is requested.

The Third Obviousness Rejection

Claim 5 stands rejected under 35 U.S.C. § 103 in view of Tseretopoulous et al., Subramanian et al., and Schuster et al. (US 2017/066662). This rejection should be withdrawn for at least the following reason. Claim 5 depends from independent claim 1 and Schuster et al. fails to make up for the aforementioned deficiencies with respect to the combination of Tseretopoulous et al. and Subramanian et al. in the context of independent claim 1. Accordingly, this rejection should be withdrawn.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SAJVP172US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact inventor's undersigned representative at the telephone number below.

Respectfully submitted,

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EXAMINER
LERNER, MARTIN

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NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

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

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

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PTOL-90A (Rev. 04/07)

Office Action Summary	Application No. 16/295,034	Applicant(s) Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	AIA (FITF) Status Yes

-- 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 01 March 2021.

☐ 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) 1-7 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) 1-7 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 _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

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

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 to 7 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor, at the time the application was filed, had possession of the claimed invention.

Independent claims 1 and 6 to 7 set forth new limitations that include several instances of new matter. Mainly, Applicant's Specification, as originally filed, fails to support the new limitation of "an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit." Generally, Applicant's Specification only describes

outputting sentences as voice data. The Specification, ¶[0069], does briefly describe an alternative embodiment where a first output sentence is output as text data. However, there is nothing that makes a distinction between a first output sentence as voice data and a second output sentence as text data. Applicant points to ¶[0049], ¶[0067], and ¶[0077], as providing support for any new limitations. However, these passages were reviewed, but do not support the claim language of outputting a first output sentence corresponding to a predetermined voice as text data and outputting a second output sentence not corresponding to a predetermined voice as voice data.

Additionally, these independent claims set forth a limitation of "to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification is not replaced with another word", which limitation is maintained to present issues of new matter. The Specification, ¶[0062], does describe an embodiment where a word in a second output sentence is not replaced when a voice is classified into a second voice V1B instead of a first voice V1A. However, this is not necessarily the same as generating "when the voice is not determined to be the predetermined voice". That is, a voice is still determined to be a predetermined voice V1B. Here, voice V1B is still a predetermined voice, *e.g.*, not a default voice, even if it is not voice V1A.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have

> been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, and 6 to 7 are rejected under 35 U.S.C. 103 as being unpatentable over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Subramanian et al.* (U.S. Patent Publication 2011/0184721).

Concerning independent claims 1 and 6 to 7, *Tseretopoulous et al.* discloses a system, software, and computer implemented method for conversational interface personalization based on input context, comprising:

"a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice" – a received input can be analyzed to identify a particular input personality type ("a predetermined voice"); when the received input is associated with a voice input, auditory factors can be considered including a pitch of the voice, a length of the sounds, a loudness of the voice, and a timber of the voice ("to analyze a voice spoken by the user") (¶[0036]); received input is analyzed to identify an intent of the input and information on the personality of the input (¶[0038]: Figure 1); one or more operations can be performed to identify a particular personality of the received input; scores can related to a formality of the input, a politeness of the input, usage of particular regional phrases, an accent or particular phrasing associated with the input, a level of sarcasm within the input, and an emotional state associated with the input; personality input types can be associated with predetermined values or ranges of values for different input types that include 'scared', 'calm, inquisitive', 'calm, instructional', 'angry', and 'angry, unsure' ("determine whether a voice is a predetermined voice") (¶[0050] - ¶[0051]: Figure 1); digital assistant 103 may be any interactive or virtual intelligence

component or agent that can be interacted with by a user, which can be verbally through one or more input components including a microphone ("a voice acquiring unit") (¶[0063]: Figure 1); here, identifying a personality type of a received input to determine a particular personality input type is equivalent to "a voice classifying unit configured to analyze a voice spoken by a user . . . to determine whether the voice is a predetermined voice"; that is "a predetermined voice" can be identified from auditory factors of the voice input as representing an emotional state of the user as 'angry';

"an intention analyzing unit to detect intention information indicating what kind of information is wished to be acquired by the user" – a conversational input is analyzed to determine an intent (Abstract); a received input at conversational analysis system 102 is analyzed to identify an intent of the input (¶[0038]: Figure 1); conversational analysis system 102 can analyze the received input to determine an intent of the input, *e.g.*, a particular question, query, comment (¶[0040]: Figure 1); natural language processing (NLP) engine 208 includes an intent deciphering module 210 (¶[0067]: Figure 2A); NLP engine 208 determines an intent of the conversational input, where the intent can represent a question, query, or information associated with conversational input 205, and can be determined by natural language understanding (NLU) using intent deciphering module 210 (¶[0068]: Figure 2A);

"a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information" – a set of responsive content is determined and includes a set of initial tokens representing an initial response (Abstract); based on a determined intent ("based on the intention information"), conversational analysis system 102 can generate a corresponding

response or response content to be provided back to client device 180 ("notification information to be notified to the user") (¶[0040]: Figure 1); where the determined intent of the received input is a question, response analysis engine 120 may be used to derive a responsive answer to the question; the answer may be a particular value or query response (¶[0052]: Figure 1); NLP engine 208 provides its outputs of the determined intent to response analysis engine 225; response analysis engine 225 uses this information to determine a suitable response to conversational input 205 based on the intent; once the essence or general substance of the response is determined, response analysis engine 225 provides that information to NLG engine 228 (¶[0070] - ¶[0071]: Figure 2A); here, a response is equivalent to a "notification" and response information is "notification information"; that is, a user is being 'notified' of a response information;

"an output-content generating unit configured to generate, when the voice is determined to be the predetermined voice, a first output sentence in which at least one word selected among words included in the notification information is replaced with another word" – at least one token associated with a similar lexical personality score is replaced with a determined synonym token to generate a modified version of the response content that is then transmitted to a device in response to the input (Abstract); natural language generation engine (NLG) 124 generates a sentence ("a first output sentence") or detailed response to be provided via conversational interface 108 (¶[0052]: Figure 1); once an initial set of response content is available, lexical personality filter module 128 can be used to determine and apply the appropriate modification to the response content to be used to generate a personalized response; a personalized response can be generated by identifying one or more synonyms from

synonym repository 136 of the base words, phrases, and tokens, included in the initial response and replacing one or more of those base portions with synonyms having a matching or similar set of characteristics to those determined to be associated with received input using a personality-based response module 130 ("in which at least one word selected among words included in the notification information is replaced with another word"); one or more synonyms are identified for substitution based on their match associated with one or more predetermined lexical personality scores 142 ("when the voice is determined to be the predetermined voice") (¶[0055]: Figure 1); NLG engine 228 can replace at least one token from the initial token set with the at least one suitable synonym; only one of the initial tokens may be replaced or substituted with a synonym token in some instance, while in others multiple tokens or the entire set of tokens may be replaced (¶[0072]: Figure 2A); here, "the predetermined voice" corresponds to a predetermined lexical personality having a highest score, when a lexical personality score is determined by analyzing voice input including a pitch of the voice, a length of the sounds, a loudness of the voice, and a timber of the voice (¶[0036]);

"to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word" – NLG engine 228 can replace at least one token from the initial token set with the at least one suitable synonym; one embodiment provides that only one of the initial tokens may be replaced or substituted with a synonym token while in others multiple tokens or the entire set of tokens may be replaced (¶[0073]: Figure 2); where the conversational input is a spoken

or verbal input, the voice of the speaker can also be analyzed to identify a particular accent, a mood detectable from the speech pattern, and other audible-related aspects (¶[0077]: Figure 3: Step 310); a determination is made to determine whether to adjust the identified persona response type (¶[0099]: Figure 5: Step 520); content may include persona-specific words or phrases including catch phrase or words commonly associated with the persona; those words or phrases may be synonyms of particular words, phrase, or tokens included in the response content, and can replace one or more tokens from the response content (¶[0100]: Figure 5: Step 525); here, if a different accent or mood is detected from a speech pattern, then this implies "when the voice is not determined to be the predetermined voice"; implicitly, a different set of words are replaced for a different persona and some of these words may not be replaced for a different persona, so that "at least one word selected among words included in the notification information is not replaced with another word";

"an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit" – conversational interfaces may output responses in various formats including textual output and auditory outputs (¶[0003]); conversational interface 108 manages and conducts conversations and interactions via auditory or textual methods (¶[0048]: Figure 1); digital assistant 186 may work and interact via text or voice (¶[0063]: Figure 1).

Concerning independent claims 1 and 6 to 7, *Tseretopoulous et al.* generally discloses the concept of replacing words of a sentence according to a voice of a persona. Implicitly, if a persona is determined to be a first persona, then words in a

sentence are replaced to generate a first sentence, and if a persona is determined to a be a second persona, then words in a sentence are replaced to generate a second sentence. Generally, a first sentence would have a different word replacement as compared to a second sentence, so that there would be at least one word that is not replaced in a sentence for a second persona. *Tseretopoulous et al.* actually discloses an embodiment where only one of the initial tokens may be replaced or substituted with a synonym token while in others multiple tokens or the entire set of tokens may be replaced. (¶[0073]: Figure 2) Given that a number of words and specific words may not be replaced, or are replaced with different words, for a determined persona, it is logical that there would be at least one word that is not replaced for a sentence of a second persona. *Tseretopoulous et al.*, then, discloses the limitation of "to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word." Literally, this limitation only requires that one word is not replaced for a second persona as compared to words replaced for a first persona. Additionally, *Tseretopoulous et al.* discloses that a conversational interface provides output of text or auditory voice. The only element not clearly disclosed by *Tseretopoulous et al.* is "an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit." Still, *Tseretopoulous et al.* discloses both text and auditory output, so that one skilled in the art could understand that text output and auditory output could be applied to different sentences.

Concerning independent claims 1 and 6 to 7, *Subramanian et al.* teaches a similar idea of communicating across voice and text channels with emotion preservation. (Abstract) Emotion markup component 210 may specify particular words, phrases, sentences, and passages in a communication for emotion analysis. (¶[0037]: Figure 2) A speaker profile specifies a speaker's dialect and geographic region, and also personality attributes that define the uniqueness of the speaker's communications. These attributes are used for modifying the dictionary definitions for words and speech patterns that the speaker uses to convey emotion. (¶[0048]: Figure 2) Voice analyzer 232 attempts to identify a speaker by comparing voice patterns in a conversation with voice patterns from identified speakers. If voice analyzer 232 recognizes a speaker's voice from its voice patterns, context analyzer 230 is notified which then selects a context profile for the speaker from profile database 212. (¶[0050]: Figure 2) Text and emotion translation architecture 272 translates text into a different dialect than the original communication, and can convert emotion data expressed in one culture to another culture using a set of emotion definitions in emotion to emotion dictionary 255. The culture adjusted emotion metadata is then used to modify the translated text with emotion words and text patterns that is common to the culture of the language. The translated emotion metadata might be used directly in textual communication of emails and instant messages. If voice is desired, the translated emotion metadata is fed into speech and emotion synthesis architecture 270 which modulates the text into audible word sounds and adjusts the delivery with emotion using the translated emotion metadata. (¶[0077]: Figure 5) Text translator 252 can text mine emotion-text/phrase dictionary 220 for words and phrases that convey the emotion, but for the culture of the

listener. (¶[0079]: Figure 5) The process continues by checking if the text is marked for emotion adjustment, and the emotion metadata is translated to the user's culture using definitions in emotion to emotion dictionary. An emotion to word/phrase dictionary is mined for words that convey the emotion consistent with the culture of the user. A check is made to determine whether to synthesize the text into audio. If not, the text with translated emotion is output. Otherwise, the text is modified, and the modulated voice is adjusted and synthesized voice with emotion is output. (¶[0102]: Figure 8B: Steps 832 to 838) *Subramanian et al.*, then, is similar to *Tseretopoulous et al.* as directed to analyzing a voice to classify it into an emotion, and then modifying words in sentences according to definitions in an emotion to emotion dictionary that reflect a culture of an identified voice. Additionally, *Subramanian et al.* teaches that a decision can be made to output a communication with modified words as text or as synthesized voice in Step 826 of Figure 8B. *Subramanian et al.*, then, teaches "an output controller configured to output the first output sentence as text data to a first output unit and the second output sentence as voice data to a second output unit" because any given sentence can be output as text or synthesized voice. An objective is to communicate across channels while preserving emotional content of a communication. (¶[0005]) It would have been obvious to one having ordinary skill in the art to output a first sentence as text data and to output a second sentence as voice data as taught by *Subramanian et al.* to perform synonym replacement of words based on a detected accent or mood of *Tseretopoulous et al.*

Concerning claim 3, *Tseretopoulous et al.* discloses "the output-content generation unit is further configured to read relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification information with the second word when the word included in the notification information matches with the first word" because one or more synonyms of tokens included in the initial response are replaced with synonyms having a matching or similar set of characteristics as those determined to be associated with received input using personality-based response module 130. Each of the base words 138 may be associated with a plurality of synonyms 140, where each synonym 140 is associated with a set of one or more predefined lexical personality scores 142. These scores 142 are compared to the scores associated with the received input, and one or more of synonyms 140 is identified as appropriate for substitution based on their match. (¶[0055]: Figure 1) That is, "relationship information" is an association between words that are synonyms, so that a base word 138 and a synonym 140 for a base word are "information of a first word that is a predetermined word and a second word that is associated with the first word". Then synonym replacement based on score to determine a match is "to replace a word included in the notification information with the second word to generate the first output sentence when the word included in the notification information matches with the first word."

Claims 2 and 4 are rejected under 35 U.S.C. 103 as being unpatentable over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Subramanian*

et al. (U.S. Patent Publication 2011/0184721) as applied to claim 1 above, and further in view of *Aoyama et al.* (U.S. Patent Publication 2017/0337921).

Concerning claim 2, *Tseretopoulous et al.* discloses "the notification-information acquiring unit is further configured to acquire, as the notification information, content information to be notified to the user" and "the output-content generating unit is further configured to select the at least one word among the words included into the notification information based on a word included in the content information". That is, *Tseretopoulous et al.* broadly discloses content information that may include a response to a query and replacing at least one word in this response to the query that includes content information. However, *Tseretopoulous et al.* does not disclose "type information indicating a type of the content information" and at least one word to be replaced with the other word based "the type information that is associated with the content information". Here, *Tseretopoulous et al.* does not provide "type information".

Concerning claim 2, *Aoyama et al.* teaches controlling output of a response to speech of a user in accordance with acquired information regarding a speech state of the user. (Abstract) User state estimation unit 15 is configured to estimate various states of the user on the basis of various types of acquired information including the acquired sound input. User state estimation unit 15 calculates a 'degree of composure' which is a parameter for determining a psychological state of the user, *e.g.*, whether the user is calm on the basis of the analysis result of the acquired sound input. (¶[0102]: Figure 2) Response parameter generation unit 16 is configured to generate a response parameter on the basis of the information regarding the detected user state and speech style of the user. (¶[0115]: Figure 2) Then response generation unit 17 replaces the

response component in the generated form with the acquired name corresponding to the response component. Response generation unit 17 replaces a response component indicating the personal name "Taro Yamada" with the name "Mr. Yamada" in accordance with the speech style of the user and generates the response content, "You have a meeting with Mr. Yamada in room A." Additionally, response generation unit 17 may replace the information indicating a time "13:00" with an expression indicating a time of "1 pm". (¶[0138] - ¶[0140]: Figure 7) Here, *Aoyama et al.* teaches "type information" at least for a name of a person or a time expression, where a name of a person "Taro Yamada" can be replaced with "Mr. Yamada" or "Taro" and time "13:00" can be replaced with "1 pm" based on a 'speech style of the user'. (¶[0138] - ¶[0140]: Figure 7) Figure 7 illustrates a data structure of 'personal name data' and 'date-time expression pattern', which are "type information indicating a type of the content information" for "content information" of "You have a meeting with Mr. Yamada tomorrow at 1 pm in room A" or "You have a meeting with Taro at 13:00 10/1/2014." (Compare Specification, ¶[0023] and ¶[0030]: Figures 4 to 5, which almost identically describes requesting schedule information for a meeting at a certain date and time with Mr. Yamada.) An objective is to control a response to sound input in a preferred mode corresponding to a change in a situation of a user to make a user feel more comfortable. (¶[0004] - ¶[0007]) It would have been obvious to one having ordinary skill in the art to replace words in an output sentence based on type information as taught by *Aoyama et al.* in a conversational interface that is personalized based on input context of *Tseretopoulous et al.* for a purpose of making a user feel more comfortable with a response.

Concerning claim 4, *Tseretopoulous et al.* discloses "the output-content generating unit is further configured to select the at least one word among the words included in the notification information" when words are replaced by their synonyms. However, *Tseretopoulous et al.* omits "the relationship further includes information of type information indicating a type of the first word" and selecting a word as a word to be replaced "when the type information of the word included in the notification information matches with the type information of the first word and the word included in the notification information matches with the first word". Still, *Aoyama et al.* teaches "type information" at least for a name of a person or a time expression, where a name of a person "Taro Yamada" can be replaced with "Mr. Yamada" or "Taro" and time "13:00" can be replaced with "1 pm" based on a 'speech style of the user'. (¶[0138] - ¶[0140]: Figure 7) Figure 7 illustrates a data structure of 'personal name data' and 'date-time expression pattern', which are "type information" for information content of "You have a meeting with Mr. Yamada tomorrow at 1 pm in room A" or "You have a meeting with Taro at 13:00 10/1/2014." Here, *Aoyama et al.* teaches "relationship information" that is not necessarily an association between synonyms, but is a data structure for replacing names and times based on "type information" of 'personal name data' and 'date-time expression pattern'. (¶[0121] - ¶[0126]: Figure 7) That is, *Aoyama et al.* teaches that notification information of a person "Taro Yamada" matches with a notification of a name by response generation unit 17, and replaces "Taro Yamada" with "Mr. Yamada" or "Taro" based on "type information" of 'personal name data'.

Claim 5 is rejected under 35 U.S.C. 103 as being unpatentable over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Subramanian et al.* (U.S. Patent Publication 2011/0184721) as applied to claim 1 above, and further in view of *Schuster et al.* (U.S. Patent Publication 2017/0366662).

Tseretopoulous et al. does not expressly disclose "the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper", but discloses something close to it. Specifically, *Tseretopoulous et al.* discloses received input can be a voice input, and auditory factors can be considered including a loudness of the voice. (¶[0036]) Even if this limitation of "to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper" is omitted by *Tseretopoulous et al.*, it is taught by *Schuster et al.* Generally, *Schuster et al.* teaches privacy mode detection and response over a voice activated interface to determine based on user input whether the user desires the device to enter a private mode. While in the private mode, the device may alter the manner in which it communicates to the user. (Abstract) An utterance is received from a user, and it is determined whether the utterance is a whispered utterance. Communications from the device are altered to the user if the user has whispered the utterance. Normally audible communications from the device are instead played at reduced volume or are displayed and not audibly played at all in the altered condition. (¶[0008]) A signal received at a microphone is analyzed to detect a whispered microphone input, where 'whisper' or 'whispered' refer to unvoiced or substantially unvoiced speech and hushed speech. Cepstral analysis may be used to detect

whispered input. (¶[0018]) This mode change alters the way the device interacts with the user. The device may present the information visually rather than audibly, or the device can synthesize whispered speech feedback. (¶[0021] - ¶[0022]) An objective is to provide a private communication mode enabling the user to interact with the device in a private manner, to avoid disturbing other people, to keep their interaction confidential, or simply to avoid social awkwardness associated with communicating with an electronic device. (¶[0017]) It would have been obvious to one having ordinary skill in the art to classify a voice to be a predetermined voice when the voice spoken by the user is a whisper as taught by *Schuster et al.* to provide conversational personalization of *Tseretopoulous et al.* for a purpose of avoiding disturbing other people or to keep an interaction confidential.

Response to Arguments

Applicant's arguments filed 01 March 2021 have been considered but are moot in view of new grounds of rejection as necessitated by amendment.

Applicant's amendments overcome the objections to the title and to the Specification.

Applicant amends the claims and presents arguments directed against the prior rejection of the independent claims as being obvious under 35 U.S.C. §103 over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Aoyama et al.* (U.S. Patent Publication 2017/0337921). Generally, Applicant amends the independent claims to set forth new limitations directed to "when the voice is determined to be the predetermined voice . . . to generate, when the voice is not determined to be the

predetermined voice, a second output sentence in which at least one word is selected among words included in the notification information is not replaced with another word" and "an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit." Mainly, Applicant's argument is that *Tseretopoulous et al.* and *Aoyama et al.* do not disclose or teach these new limitations.

Applicant's amendments necessitate new grounds of rejection. Firstly, these amendments raise issues of new matter under 35 U.S.C. §112(a). Applicant alleges that support for these amendments is provided at ¶[0049], ¶[0067], and ¶[0077] of the Specification. Here, these passages do not actually correspond to the paragraphs of the Specification, which actually concludes with ¶[0075]. So, Applicant could be referring to the corresponding paragraphs of the published application, U.S. Patent Publication 2019/0279631 (*Naganuma*). Still, even this published application does not appear to support the claimed subject matter.

Specifically, independent claims 1 and 6 to 7 are amended to set forth "an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit." It is clear that this embodiment is not contemplated by the originally-filed Specification. At best, ¶[0069] of the Specification (or, ¶[0077] of the corresponding published application) describes an embodiment where a first output sentence can be output as text and not as voice. However, Applicant's Specification, as originally filed, does not contemplate that a first sentence is output as text data and a second sentence is output as voice data. Instead, Applicant's Specification, ¶[0069], only provides that a first

sentence is output as text data instead of voice, but saying nothing about a second sentence. Applicant's claim language implies that an output mode is personalized to a particular voice, so that if a voice is determined to be a predetermined voice, then a first sentence is output as text, but if a voice is not determined to be the predetermined voice, then a second sentence is output as voice. This is not reasonably described by the embodiments of ¶[0069] of the Specification, and is new matter under 35 U.S.C. §112(a).

Additionally, independent claims 1 and 6 to 7 are amended to set forth a new limitation of "to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word", which may similarly raise issues of new matter due to the limitation of "when the voice is not determined to be the predetermined voice". The Specification, ¶[0062] (or, ¶[0070] of the corresponding published application), does describe an embodiment where a word is not replaced in a second output sentence. Still, it is not actually disclosed that outputting a second sentence without replacing a word is because "the voice is not determined to be the predetermined voice". Instead, this embodiment is actually classifying voice V1 into a second voice V1B, which is still a "predetermined voice". Even if voice V1 is classified into a second voice V1B instead of a first voice V1A, second voice V1B is a predetermined voice, *i.e.*, the predetermined voice is second voice V1B. This may appear to be a minor semantic difference, but the claim language implies some default scenario when a voice is not classified into any voice, so that no

words are replaced, and this is not supported by the originally-filed Specification. This limitation, then, can be construed as new matter.

New grounds of rejection as set forth as directed to independent claims 1 and 6 to 7 as being obvious under 35 U.S.C. §103 over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Subramanian et al.* (U.S. Patent Publication 2011/0184721). Here, *Subramanian et al.* is being substituted in the rejection of the independent claims for *Aoyama et al.* The rejection of some of the dependent claims continues to rely upon *Aoyama et al.* and *Schuster et al.* Generally, the new limitations necessitate the new grounds of rejection.

Tseretopoulous et al. can be construed to disclose the new limitations of "an output-content generating unit configured to generate, when the voice is determined to be the predetermined voice, a first output sentence in which at least one word selected among words included in the notification information is replaced with another word, to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word". Generally, *Tseretopoulous et al.* is directed to replacing words to generate sentences based on analysis of voice input. If a certain personality input type is detected based on analysis of voice input, then words are replaced in an output sentence to reflect that personality type. *Tseretopoulous et al.* discloses that there are a plurality of personality input types, *e.g.*, scared, calm, angry, and words of a sentence are replaced accordingly. Implicitly, a voice of a first personality input type can be construed to correspond to "the predetermined voice" and a voice of a second personality input type can be construed

to correspond to "not determined to be the predetermined voice". This is equivalent to the embodiment described in the Specification. Moreover, replacement of words will be different for the first personality input type and the second personality input type of *Tseretopoulous et al.* Specifically, *Tseretopoulous et al.*, ¶[0055], ¶[0057], ¶[0073], and ¶[0081], discloses 'replacing one or more of those base portions with synonyms', 'replacing one or more based words or tokens', 'replace at least one token from the initial token set', and 'at least one token from a set of initial token can be replaced'. Broadly, "at least one word selected among words" in a sentence is not replaced by *Tseretopoulous et al.* That is, it is generally the case that different word replacements apply to different personality input types, and not every word is replaced the same way for a given personality input type. *Tseretopoulous et al.*, then, reasonably discloses these limitations of the independent claims in accordance with the embodiments of the Specification.

Moreover, *Tseretopoulous et al.* and *Subramanian et al.* render obvious the limitation of "an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit." *Tseretopoulous et al.*, ¶[0003], ¶[0048], and ¶[0063], actually states that a conversational interface can output either text or auditory voice. So, *Tseretopoulous et al.* discloses "an output controller configured to output . . . text data to a first output unit and to output . . . as voice data to a second output unit." Moreover, *Subramanian et al.*, ¶[0102]: Figure 8B: Step 826, teaches that a check is made whether to synthesize the text into audio. *Subramanian et al.*, then, provides an output controller that can differentially output some sentences as text and some sentences as

synthesized speech. Generally, *Subramanian et al.* is directed to a similar problem as *Tseretopoulous et al.*, to analyze a voice of a user, and to modify words in text to reflect emotional characteristics determined from the analysis of the voice. *Subramanian et al.* does this with an emotion-text/phrase dictionary 220 that conveys emotion in words of the culture corresponding to the speaker's voice. *Tseretopoulous et al.* and *Subramanian et al.*, then, render obvious all of the limitations of the independent claims.

Applicant's amendments necessitate these new grounds of rejection. Accordingly, this rejection is properly FINAL.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Naganuma is a corresponding patent publication.

Dowlatkhah, Barton et al., Aoyagi et al., Teague et al., Ishii et al., Christian et al., and Endo et al. disclose related prior art.

Applicant's amendment necessitated the new grounds 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 MARTIN LERNER whose telephone number is (571) 272-7608. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Washburn can be reached on (571) 272-5551. 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 https://ppair-my.uspto.gov/pair/PrivatePair. Should you have questions on access to the Private

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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.

/MARTIN LERNER/
Primary Examiner
Art Unit 2657
March 18, 2021

Notice of References Cited	Application/Control No. 16/295,034	Applicant(s)/Patent Under Reexamination Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	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-20110184721-A1	07-2011	Subramanian; Balan	G10L19/0018	704/4
*	B	US-20190279631-A1	09-2019	Naganuma; Tatsumi	G10L15/22	---
*	C	US-10341825-B2	07-2019	Dowlatkhah; Sangar	G10L13/08	---
*	D	US-10706846-B1	07-2020	Barton; William Folwell	G10L15/1815	---
*	E	US-20010041977-A1	11-2001	Aoyagi, Seiichi	G10L15/22	704/246
*	F	US-20090234639-A1	09-2009	Teague; Paul	G06F40/56	704/270.1
*	G	US-20150331665-A1	11-2015	ISHII; YASUNORI	G10L15/30	715/728
*	H	US-20170256252-A1	09-2017	Christian; Jessica M.	G10L13/027	---
*	I	US-20170364310-A1	12-2017	ENDO; MITSURU	G10L17/26	---
	J					
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FOREIGN PATENT DOCUMENTS

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	N					
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	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

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

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

CERTIFICATE OF TRANSMISSION

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being submitted *via* the USPTO EFS Filing System on the date shown below to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Date: March 1, 2021 /Bailey Zugan Rayl/
Bailey Zugan Rayl

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Inventor(s):	Tatsumi Naganuma	Examiner:	Martin Lerner
Serial No:	16/295,034	Art Unit:	2657
Filing Date:	March 7, 2019	Conf. No:	1688

Title: WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION (as amended)

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

REPLY TO OFFICE ACTION

Examiner Lerner:

This paper is filed in response to the Office Action dated November 30, 2020. Kindly enter the following amendments.

AMENDMENTS TO THE SPECIFICATION

In the Specification

Please replace the title that appears at page 1, lines 1-2 with the following amended title:

~~OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM~~ WORD REPLACEMENT IN OUTPUT GENERATION FOR DETECTED INTENT BY VOICE CLASSIFICATION

Please replace paragraph [0025] with the following amended paragraph:

[0025] Having acquired the attribute type information E0, the attribute-information acquiring unit 50 sets the attribute content information E1 for each of the attribute type information E0. The attribute-information acquiring unit 50 extracts, for example, the attribute content information E1 from the text data generated by the voice analyzing unit 32. For example, when a keyword "today" is included in the text data generated from the voice V1, the attribute content information E1 corresponding to the attribute type information E0 of a date is set to today's date ("March 20, 2020" in the example of FIG. 4) ~~("March 20, 2020 in the example of FIG. 4)~~. Furthermore, the attribute-information acquiring unit 50 can set the attribute content information E1 corresponding to the attribute type information E0 in advance. In this case, when the intention information I is a schedule, for example, setting data indicating that the attribute content information E1 is a content determined in advance is stored in the storage 20. That is, for example, it is stored in advance that the attribute content information E1 corresponding to the attribute type information E0 of a person is "Mr. Yamada" in the storage 20. By this, the attribute-information acquiring unit 50 can set the attribute content information E1 of a person even when a keyword representing a person is not included in the text data. Moreover, the attribute-information acquiring unit 50 can set the attribute content information E1 by communicating with an external server by the communication unit 18.

For example, when one of the attribute type information E0 is a location, the intention analyzing unit 34 can acquire a current position using a global positioning system (GPS) by communication, and can set it as the attribute content information E1. Moreover, the output-content control device 1 can output a notification to prompt the user H to provide information of the attribute content information E1. In this case, for example, the attribute-information acquiring unit 50 selects the attribute type information E0 for which acquisition of the attribute content information E1 is required, and causes the output-content generating unit 40 to generate a sentence to request the user H to give the attribute content information E1 for the output-content generating unit 40. For example, in the case of the attribute type information E0 of a date, the output-content generating unit 40 generates a sentence "Please provide a date for which the schedule is wished to be notified", or the like. Subsequently, the output controller 44 causes the voice output unit 12 to output this sentence. Thus, the user H speaks, for example, a voice indicating that the date is today, and the voice is analyzed by the voice analyzing unit 32, and the attribute-information acquiring unit 50 acquires information indicating that one of the attribute content information E1 is “today”.

Please replace paragraph [0072] with the following amended paragraph:

[0072] The output-content control device 1A acquires the voice V1 that has been detected by the voice detecting unit 10 through information communication via the communication unit 15A and the communication unit 18A. The output-content control device 1A then generates the output sentence by performing similar processing as the first embodiment, and ~~output~~ outputs the output sentence to the response device 2A. The response device 2A converts the output sentence into the voice data by the voice output unit 12 to output as the voice V2. Note that the output-content control device 1A can generate the output sentence and transmit to the response device 2A. In this case, the voice output unit 12 outputs the acquired voice data as the voice V2. As described, the information output system 100 includes the output-content control device 1A, the voice detecting unit 10 that detects the voice V1 spoken by the user H, and the voice output unit 12 that outputs the output sentence generated by the output-content generating unit 40 as the voice V2. As described above, the output-content control device 1A produces effects similar to those of the first embodiment even when the response device 2A is a separate unit. That is, it can be said that the output-content control device 1 according to the first embodiment is integrated with the response device 2A and, in other words, can also be regarded as an information output system.

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) An output-content control device comprising:

a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice;

an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user;

a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information; [[and]]

an output-content generating unit configured to ~~generate an output sentence as sentence data to be output to the user based on the notification information, wherein~~

~~the output-content generating unit is further configured to~~ generate, when the voice is determined to be the predetermined voice, [[the]] a first output sentence in which at least one word selected among words included in the notification information is replaced with another word ~~when the voice is determined to be the predetermined voice~~, to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word; and

an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit.

2. (Currently Amended) The output-content control device according to claim 1, wherein

the notification-information acquiring unit is further configured to acquire, as the notification information, content information to be notified to the user and type information indicating a type of the content information, and

the output-content generating unit is further configured to select the at least one word among the words included in the notification information ~~to be replaced with the other word~~ based on a word included in the content information and the type information that is associated with the content information.

3. (Currently Amended) The output-content control device according to claim 2, wherein

the output-content generating unit is further configured to read relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification information with the second word to generate the first output sentence when the word included in the notification information matches with the first word.

4. (Currently Amended) The output-content control device according to claim 3, wherein

the relationship information further includes information of type information indicating a type of the first word, and

the output-content generating unit is further configured to select the at least one word among the words included in the notification information ~~a word included in the notification information as a word to be replaced with another word~~ when the type information of the word included in the notification information matches with the type information of the first word and the word included in the notification information matches with the first word.

5. (Original) The output-content control device according to claim 1, wherein

the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper.

6. (Currently Amended) An output-content control method comprising:

analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information to be notified to the user based on the intention information; [[and]]

generating, when the voice is determined to be the predetermined voice, ~~an output sentence as sentence data to be output to the user based on the notification information, wherein~~

~~the generating further includes generating the output~~ a first sentence in which at least one word selected among words included in the notification information is replaced with another word ~~when the voice is determined to be the predetermined voice~~;

generating, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word; and

outputting the first output sentence as text data to a first output unit and outputting the second output sentence as voice data to a second output unit.

7. (Currently Amended) A non-transitory storage medium that stores an output-content control program that causes a computer to execute:

analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information to be notified to the user based on the intention information; and

generating, when the voice is determined to be the predetermined voice, ~~an output sentence as sentence data to be output to the user based on the notification information, wherein~~

~~the generating further includes generating the output~~ a first sentence in which at least one word selected among words included in the notification information is replaced with another word ~~when the voice is determined to be the predetermined voice~~;

generating, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word; and

outputting the first output sentence as text data to a first output unit and outputting the second output sentence as voice data to a second output units.

REMARKS

Claims 1-7 are pending in the subject application upon entry of the amendments. A listing of the claims can be found on pages 5-8 of this Reply. An amendment to the specification is presented on pages 2-4 of this response. Favorable reconsideration is respectfully requested in view of the amendments and following comments.

The Amendments

Claims 1-4 and 6-9 are amended to refine claim elements and to disclaim the cited documents. Support for the amendments can be located, for example, in Fig. 7, and at paragraphs [0049], [0067], and [0077] of the specification as filed. No new matter is added with such amendments.

The First Obviousness Rejection

Claims 1-4 and 6-7 stand rejected under 35 U.S.C. § 103 in view of Tseretopoulous et al. (US 2019/0103127) and Aoyama et al. (US 2017/0337921). Withdrawal of this rejection is requested for at least the following reason. The combination of Tseretopoulous et al. and Aoyama et al. failed to teach or suggest each and every element recited in the subject claims.

Independent claims 1, 6, and 7 recite similar elements, namely: "generate, when the voice is determined to be the predetermined voice, a first output sentence in which at least one word selected among words included in the notification information is replaced with another word, to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word; and an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit," as recited in independent claim 1, and similarly recited in independent claims 6 and 7. Tseretopoulous et al. and Aoyama et al. fail to teach or suggest at least these elements as recited in the subject claims.

Tseretopoulous et al. discloses systems, software, and computer implemented methods for personalizing interactions within a conversational interface based on an

input context. One example system performs operations including receiving a conversational input received via a conversational interface. The conversational input is analyzed to determine an intent and lexical personality score based on the input's characteristics. A set of responsive content is determined and includes a set of initial tokens representing an initial response. A set of synonym tokens associated with at least some of the initial tokens are identified, and at least one synonym token associated with a similar lexical personality score to the input is determined. At least one of the initial tokens are replaced with the determined synonym token to generate a modified version of the set of response content. The modified version of the response is then transmitted to a device in response to the input. See e.g., Abstract.

Aoyama et al. discloses an information processing device to control response to a sound input in a preferred mode corresponding to a change in a situation or a user, the information processing device including: a control unit configured to control output of a response to speech of a user in accordance with acquired information regarding a speech state of the user. See e.g., Abstract.

Neither Tseretopoulous et al. nor Aoyama et al. disclose, teach, or suggest: generate, when the voice is determined to be the predetermined voice, a first output sentence in which at least one word selected among words included in the notification information is replaced with another word, to generate, when the voice is not determined to be the predetermined voice, a second output sentence in which at least one word selected among words included in the notification information is not replaced with another word; and an output controller configured to output the first output sentence as text data to a first output unit and to output the second output sentence as voice data to a second output unit, as recited in independent claim 1, and similarly recited in independent claims 6 and 7.

Accordingly, in view of at least the foregoing it is evident that independent claims 1, 6, and 7 patentably distinguish over the combination of Tseretopoulous et al. and Aoyama et al. as the purported combination of documents fails to disclose, teach, or suggest all elements recited in the independent claims (and claims that depend there from). Accordingly, withdrawal of this rejection is respectfully requested.

The Second Obviousness Rejection

Claim 5 stands rejected under 35 U.S.C. § 103 in view of Tseretopoulous et al., Aoyama et al., and Schuster et al. (US 2017/0366662). This rejection should be withdrawn for at least the following reason. Claim 5 depends from independent claim 1 and the Schuster et al. does not make up for the aforementioned deficiencies with regard to the combination of Tseretopoulous et al. and Aoyama et al. in the context of independent claim 1. Accordingly, withdrawal of this rejection is requested.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [SAJVP172US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact inventor's undersigned representative at the telephone number below.

Respectfully submitted,

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EXAMINER
LERNER, MARTIN

ART UNIT	PAPER NUMBER
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NOTIFICATION DATE	DELIVERY MODE
11/30/2020	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):

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PTOL-90A (Rev. 04/07)

Office Action Summary	Application No. 16/295,034	Applicant(s) Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	AIA (FITF) Status Yes

-- 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 _____.

☐ 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) 1-7 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) 1-7 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 _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☑ All b)☐ Some** c)☐ None of the:

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

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Word Replacement in Output Generation for Detected Intent by Voice Classification.

The disclosure is objected to because of the following informalities:

In ¶[0025], "("March 20, 2020 in the example" is missing a closed quote as "("March 20, 2020" in the example".

In ¶[0072], "and output the output sentence" should be "and outputs the output sentence"

Appropriate correction is required.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 to 4 and 6 to 7 are rejected under 35 U.S.C. 103 as being unpatentable over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Aoyama et al.* (U.S. Patent Publication 2017/0337921).

Concerning independent claims 1 and 6 to 7, *Tseretopoulous et al.* discloses a system, software, and computer implemented method for conversational interface personalization based on input context, comprising:

"a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice" – a received input can be analyzed to identify a particular input personality type ("a predetermined voice"); when the received input is associated with a voice input, auditory factors can be considered including a pitch of the voice, a length of the sounds, a loudness of the voice, and a timber of the voice ("to analyze a voice spoken by the user") (¶[0036]); received input is analyzed to identify an intent of the input and information on the personality of the input (¶[0038]: Figure 1); one or more operations can be performed to identify a particular personality of the received input; scores can related to a formality of the input, a politeness of the input, usage of particular regional phrases, an accent or particular phrasing associated with the input, a level of sarcasm within the input, and an emotional state associated with the input; personality input types can be associated with predetermined values or ranges of values for different input types that include 'scared', 'calm, inquisitive', 'calm, instructional', 'angry', and 'angry, unsure' ("determine whether a voice is a predetermined voice") (¶[0050] - ¶[0051]: Figure 1); digital assistant 103 may be any interactive or virtual intelligence component or agent that can be interacted with by a user, which can be verbally

through one or more input components including a microphone ("a voice acquiring unit") (¶[0063]: Figure 1); here, identifying a personality type of a received input to determine a particular personality input type is equivalent to "a voice classifying unit configured to analyze a voice spoken by a user . . . to determine whether the voice is a predetermined voice"; that is "a predetermined voice" can be identified from auditory factors of the voice input as representing an emotional state of the user as 'angry';

"an intention analyzing unit to detect intention information indicating what kind of information is wished to be acquired by the user" – a conversational input is analyzed to determine an intent (Abstract); a received input at conversational analysis system 102 is analyzed to identify an intent of the input (¶[0038]: Figure 1); conversational analysis system 102 can analyze the received input to determine an intent of the input, *e.g.*, a particular question, query, comment (¶[0040]: Figure 1); natural language processing (NLP) engine 208 includes an intent deciphering module 210 (¶[0067]: Figure 2A); NLP engine 208 determines an intent of the conversational input, where the intent can represent a question, query, or information associated with conversational input 205, and can be determined by natural language understanding (NLU) using intent deciphering module 210 (¶[0068]: Figure 2A);

"a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information" – a set of responsive content is determined and includes a set of initial tokens representing an initial response (Abstract); based on a determined intent ("based on the intention information"), conversational analysis system 102 can generate a corresponding response or response content to be provided back to client device 180 ("notification

information to be notified to the user") (¶[0040]: Figure 1); where the determined intent of the received input is a question, response analysis engine 120 may be used to derive a responsive answer to the question; the answer may be a particular value or query response (¶[0052]: Figure 1); NLP engine 208 provides its outputs of the determined intent to response analysis engine 225; response analysis engine 225 uses this information to determine a suitable response to conversational input 205 based on the intent; once the essence or general substance of the response is determined, response analysis engine 225 provides that information to NLG engine 228 (¶[0070] - ¶[0071]: Figure 2A); here, a response is equivalent to a "notification" and response information is "notification information"; that is, a user is being 'notified' of a response information;

"an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information" – natural language generation engine (NLG) 124 ("an output-generating unit") generates a sentence ("an output sentence as sentence data") or detailed response to be provided via conversational interface 108 ("to be output to the user") (¶[0052]: Figure 1); NLG engine 124 can receive an output of response analysis engine 120 and prepare a natural language response to the received input based on that output; NLG engine 124 can identify or determine at least a base set of words, phrases, or tokens to be used in representing response content received from response analysis engine 120, where the base set of words, phrases, or tokens are associated with an initial response determined by response analysis engine 120 (¶[0054]: Figure 1); NLG engine 228 is used to prepare the conversational response based on the response essence or content identified by the response analysis engine 225 (¶[0071]: Figure 2);

"wherein the output-content generating unit is further configured to generate the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice" – at least one token associated with a similar lexical personality score is replaced with a determined synonym token to generate a modified version of the response content that is then transmitted to a device in response to the input (Abstract); natural language generation engine (NLG) 124 generates a sentence ("to generate the output sentence") or detailed response to be provided via conversational interface 108 (¶[0052]: Figure 1); once an initial set of response content is available, lexical personality filter module 128 can be used to determine and apply the appropriate modification to the response content to be used to generate a personalized response; a personalized response can be generated by identifying one or more synonyms from synonym repository 136 of the base words, phrases, and tokens, included in the initial response and replacing one or more of those base portions with synonyms having a matching or similar set of characteristics to those determined to be associated with received input using a personality-based response module 130 ("in which at least one word selected among words included in the notification information is replaced with another word"); one or more synonyms are identified for substitution based on their match associated with one or more predetermined lexical personality scores 142 ("when the voice is determined to be the predetermined voice") (¶[0055]: Figure 1); NLG engine 228 can replace at least one token from the initial token set with the at least one suitable synonym; only one of the initial tokens may be replaced or substituted with a synonym token in some instance, while in others multiple tokens or

the entire set of tokens may be replaced (¶[0072]: Figure 2A); here, "the predetermined voice" corresponds to a predetermined lexical personality having a highest score, when a lexical personality score is determined by analyzing voice input including a pitch of the voice, a length of the sounds, a loudness of the voice, and a timber of the voice (¶[0036]).

Concerning independent claims 1 and 6 to 7, *Tseretopoulous et al.* arguably anticipates these independent claims. Conceivably, *Tseretopoulous et al.* might be construed to omit a voice classifying unit configured to analyze a voice spoken by a user "to determine whether the voice is a predetermined voice". That is, *Tseretopoulous et al.* might be alleged to determine a predetermined personality instead of a "predetermined voice", but these are really the same thing because a personality can be determined from voice input including parameters of pitch, loudness, and timber. Moreover, "a predetermined voice" can reasonably be construed to include an emotional state of a voice, *e.g.*, scared, calm, angry of *Tseretopoulous et al.*

Concerning independent claims 1 and 6 to 7, *Aoyama et al.* teaches anything that might be omitted by *Tseretopoulous et al.* Generally, *Aoyama et al.* teaches controlling output of a response to speech of a user in accordance with acquired information regarding a speech state of the user. (Abstract) Information processing device 1 recognizes content spoken by a user by acquiring sound input from the user as acoustic information and analyzing the acoustic information on the basis of a sound recognition technology or natural language processing. Information processing device 1 generates response information c11*b* for presenting a confirmation result as a natural sentence ("to generate an output sentence") and outputs the response information c11*b*

as sound. One embodiment provides that information processing device receives sound input c10*a*, "Check my schedule for tomorrow at 1 pm" from user Ua, and outputs response information, c11*a*, "You have a meeting with Mr. Yamada in room A." (¶[0042] - ¶[0047]: Figure 1) In phrases used in dialogs between people, there are phrases with the same meaning but expressed differently, *e.g.*, "3 pm" and "15:00". When the information processing device 1 outputs "15:00" as a response indicating a time to a user who normally says "3 pm", the user may feel uncomfortable. A speaking style may include a certain user calling a person with a name "Taro Yamada" by adding an honorific title to the surname as "Mr. Yamada", and another person calling the person with the name "Taro Yamada" using only the first name of "Taro". Additionally, information processing device 1 controls an output mode, *e.g.*, volume or speech speed, of a response so that a user feels more natural in accordance with a predetermined situation. (¶[0049] - ¶[0052]) A speech style detection unit 115 extracts a unique expression from text information obtained by converting sound input on the basis of the result of natural language processing on the text information. (¶[0087]: Figure 2) User state estimation unit 15 is configured to estimate various states of the user on the basis of various types of acquired information including the acquired sound input. User state estimation unit 15 calculates a 'degree of composure' which is a parameter for determining a psychological state of the user, *e.g.*, whether the user is calm on the basis of the analysis result of the acquired sound input. (¶[0102]: Figure 2) Response parameter generation unit 16 is configured to generate a response parameter on the basis of the information regarding the detected user state and speech style of the user. (¶[0115]: Figure 2) Then response generation unit 17 replaces the response

component in the generated form with the acquired name corresponding to the response component. Response generation unit 17 replaces a response component indicating the personal name "Taro Yamada" with the name "Mr. Yamada" in accordance with the speech style of the user and generates the response content, "You have a meeting with Mr. Yamada in room A." Additionally, response generation unit 17 may replace the information indicating a time "13:00" with an expression indicating a time of "1 pm". (¶[0138] - ¶[0140]: Figure 7) (Compare Specification, ¶[0023] and ¶[0030]: Figures 4 to 5, which almost identically describes requesting schedule information for a meeting at a certain date and time with Mr. Yamada.) When a user is calm, response generation unit 17 may generate information indicating response content of natural language, "The weather near Tokyo Station is nice" as information indicating "weather near Tokyo Station", but when the user is in a hurried state, response generation unit 17 may generate information more plainly indicating "weather near Tokyo Station" is "clear". (¶[0154]: Figure 2) *Aoyama et al.*, then, teaches various embodiments directed to classifying a voice as a predetermined voice and generating an output sentence that replaces words when a voice is determined to be the predetermined voice. An objective is to control a response to sound input in a preferred mode corresponding to a change in a situation of a user to make a user feel more comfortable. (¶[0004] - ¶[0007]) It would have been obvious to one having ordinary skill in the art to replace words in an output sentence when a voice is determined to be a predetermined voice as taught by *Aoyama et al.* in a conversational interface that is personalized based on input context of *Tseretopoulous et al.* for a purpose of making a user feel more comfortable with a response.

Concerning claim 2, *Tseretopoulous et al.* discloses "the notification-information acquiring unit is further configured to acquire, as the notification information, content information to be notified to the user" and "the output-content generating unit is further configured to select the at least one word to be replaced with the other word based on a word included in the content information". That is, *Tseretopoulous et al.* broadly discloses content information that may include a response to a query and replacing at least one word in this response to the query that includes content information. However, *Tseretopoulous et al.* does not disclose "type information indicating a type of the content information" and at least one word to be replaced with the other word based "the type information that is associated with the content information". Here, *Tseretopoulous et al.* does not provide "type information". Still, *Aoyama et al.* teaches "type information" at least for a name of a person or a time expression, where a name of a person "Taro Yamada" can be replaced with "Mr. Yamada" or "Taro" and time "13:00" can be replaced with "1 pm" based on a 'speech style of the user'. (¶[0138] - ¶[0140]: Figure 7) Figure 7 illustrates a data structure of 'personal name data' and 'date-time expression pattern', which are "type information indicating a type of the content information" for "content information" of "You have a meeting with Mr. Yamada tomorrow at 1 pm in room A" or "You have a meeting with Taro at 13:00 10/1/2014."

Concerning claim 3, *Tseretopoulous et al.* discloses "the output-content generation unit is further configured to read relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification

information with the second word when the word included in the notification information matches with the first word" because one or more synonyms of tokens included in the initial response are replaced with synonyms having a matching or similar set of characteristics as those determined to be associated with received input using personality-based response module 130. Each of the base words 138 may be associated with a plurality of synonyms 140, where each synonym 140 is associated with a set of one or more predefined lexical personality scores 142. These scores 142 are compared to the scores associated with the received input, and one or more of synonyms 140 is identified as appropriate for substitution based on their match. (¶[0055]: Figure 1) That is, "relationship information" is an association between words that are synonyms, so that a base word 138 and a synonym 140 for a base word are "information of a first word that is a predetermined word and a second word that is associated with the first word". Then synonym replacement based on score to determine a match is "to replace a word included in the notification information with the second word when the word included in the notification information matches with the first word."

Concerning claim 4, *Tseretopoulous et al.* discloses "the output-content generating unit is further configured to select a word included in the notification as a word to be replaced with another word" when words are replaced by their synonyms. However, *Tseretopoulous et al.* omits "the relationship further includes information of type information indicating a type of the first word" and selecting a word as a word to be replaced "when the type information of the word included in the notification information matches with the type information of the first word and the word included in the

notification information matches with the first word". Still, *Aoyama et al.* teaches "type information" at least for a name of a person or a time expression, where a name of a person "Taro Yamada" can be replaced with "Mr. Yamada" or "Taro" and time "13:00" can be replaced with "1 pm" based on a 'speech style of the user'. (¶[0138] - ¶[0140]: Figure 7) Figure 7 illustrates a data structure of 'personal name data' and 'date-time expression pattern', which are "type information" for information content of "You have a meeting with Mr. Yamada tomorrow at 1 pm in room A" or "You have a meeting with Taro at 13:00 10/1/2014." Here, *Aoyama et al.* teaches "relationship information" that is not necessarily an association between synonyms, but is a data structure for replacing names and times based on "type information" of 'personal name data' and 'date-time expression pattern'. (¶[0121] - ¶[0126]: Figure 7) That is, *Aoyama et al.* teaches that notification information of a person "Taro Yamada" matches with a notification of a name by response generation unit 17, and replaces "Taro Yamada" with "Mr. Yamada" or "Taro" based on "type information" of 'personal name data'.

Claim 5 is rejected under 35 U.S.C. 103 as being unpatentable over *Tseretopoulous et al.* (U.S. Patent Publication 2019/0103127) in view of *Aoyama et al.* (U.S. Patent Publication 2017/0337921) as applied to claim 1 above, and further in view of *Schuster et al.* (U.S. Patent Publication 2017/0366662).

Tseretopoulous et al. and *Aoyama et al.* do not expressly disclose or teach "the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper", but both of this prior art disclose and teach something close to it. Specifically, *Tseretopoulous et al.*

discloses received input can be a voice input, and auditory factors can be considered including a loudness of the voice. (¶[0036]) Similarly, *Aoyama et al.* teaches that processing device 1 controls an output mode that can include a volume of speech of a response so that a user feels more natural. (¶[0052]) Given that a response is determined based on the speaking style of the user in *Aoyama et al.*, it would appear to be logically implied that if a user is speaking in a low volume, then an output mode may be a response at a low volume. "The predetermined voice" of *Aoyama et al.*, then, could be a low volume speaking style of a user that is detected to generate response content that is at a low volume, too, to make the user feel more comfortable. Implicitly, speaking at a low volume can be construed as equivalent to "a whisper".

Even if this limitation of "to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper" is omitted by *Tseretopoulous et al.* and *Aoyama et al.*, it is taught by *Schuster et al.* Generally, *Schuster et al.* teaches privacy mode detection and response over a voice activated interface to determine based on user input whether the user desires the device to enter a private mode. While in the private mode, the device may alter the manner in which it communicates to the user. (Abstract) An utterance is received from a user, and it is determined whether the utterance is a whispered utterance. Communications from the device are altered to the user if the user has whispered the utterance. Normally audible communications from the device are instead played at reduced volume or are displayed and not audibly played at all in the altered condition. (¶[0008]) A signal received at a microphone is analyzed to detect a whispered microphone input, where 'whisper' or 'whispered' refer to unvoiced or substantially unvoiced speech and hushed speech. Cepstral analysis

may be used to detect whispered input. (¶[0018]) This mode change alters the way the device interacts with the user. The device may present the information visually rather than audibly, or the device can synthesize whispered speech feedback. (¶[0021] - ¶[0022]) An objective is to provide a private communication mode enabling the user to interact with the device in a private manner, to avoid disturbing other people, to keep their interaction confidential, or simply to avoid social awkwardness associated with communicating with an electronic device. (¶[0017]) It would have been obvious to one having ordinary skill in the art to classify a voice to be a predetermined voice when the voice spoken by the user is a whisper as taught by *Schuster et al.* to control output in response to speech of a user of *Aoyama et al.* for a purpose of avoiding disturbing other people or to keep an interaction confidential.

Conclusion

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Basson et al., Filev et al., Dubey et al., Jiang et al., Catalano et al., and Saito et al. disclose related prior art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARTIN LERNER whose telephone number is (571) 272-7608. The examiner can normally be reached on Monday-Thursday 8:30 AM-6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Washburn can be reached on (571) 272-5551. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/MARTIN LERNER/
Primary Examiner
Art Unit 2657
November 24, 2020

Notice of References Cited	Application/Control No. 16/295,034	Applicant(s)/Patent Under Reexamination Naganuma, Tatsumi	
	Examiner MARTIN LERNER	Art Unit 2657	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-20190103127-A1	04-2019	Tseretopoulos; Dean C. N.	G06F40/247	---
*	B	US-20170337921-A1	11-2017	AOYAMA; Kazumi	G10L15/26	---
*	C	US-20170366662-A1	12-2017	Schuster; Adrian M.	G10L25/24	---
*	D	US-20140309999-A1	10-2014	Basson; Sara H.	G10L25/00	704/270
*	E	US-20180047201-A1	02-2018	Filev; Dimitar Petrov	G06F3/011	---
*	F	US-20180114159-A1	04-2018	DUBEY; Alpana	G06F15/16	---
*	G	US-20190115008-A1	04-2019	Jiang; Jian Min	G10L15/22	---
*	H	US-20190121842-A1	04-2019	Catalano; Pasquale A.	G06F40/253	---
*	I	US-20200013401-A1	01-2020	SAITO; Mari	G10L15/22	---
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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SAJVP172US

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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	5852804		1998-12-22	SAKO	

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	1	04-204700	JP		1992-07-27	FUJITSU TEN LIMITED		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
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	Application Number	
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SAJVP172US

CERTIFICATION STATEMENT

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

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

OR

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

See attached certification statement.

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

☒ None

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	/Greg Turocy/	Date (YYYY-MM-DD)	2019-03-07
Name/Print	Gregory Turocy	Registration Number	36952

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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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
16/295,034	03/07/2019	2658	1720	SAJVP172US	7	3

CONFIRMATION NO. 1688

FILING RECEIPT

23623
AMIN, TUROCY & WATSON, LLP
200 Park Avenue
Suite 300
Beachwood, OH 44122

Date Mailed: 03/25/2019

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

Inventor(s)

Tatsumi Naganuma, Yokohama-shi, JAPAN;

Applicant(s)

JVC KENWOOD Corporation, Yokohama-shi, JAPAN;

Power of Attorney: The patent practitioners associated with Customer Number 23623

Domestic Applications for which benefit is claimed - None.
A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

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 2018-044598 03/12/2018 Access Code Provided

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/295,034**

Projected Publication Date: 09/12/2019

Non-Publication Request: No

Early Publication Request: No
Title

OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM

Preliminary Class

704

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

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Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT5408976

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TATSUMI NAGANUMA	01/25/2019

RECEIVING PARTY DATA

Name:	JVC KENWOOD CORPORATION
Street Address:	3-12, MORIYACHO, KANAGAWA-KU
City:	YOKOHAMA-SHI, KANAGAWA
State/Country:	JAPAN
Postal Code:	221-0022

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16295034

CORRESPONDENCE DATA

Fax Number: (216)696-8731

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 216-696-8730
Email: epas@thepatentattorneys.com
Correspondent Name: AMIN, TUROCY & WATSON, LLP
Address Line 1: 200 PARK AVENUE
Address Line 2: SUITE 300
Address Line 4: BEACHWOOD, OHIO 44122

ATTORNEY DOCKET NUMBER:	SAJVP172US
NAME OF SUBMITTER:	GREGORY TUROCY
SIGNATURE:	/Greg Turocy/
DATE SIGNED:	03/07/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 2
source=DEC172#page1.tif
source=DEC172#page2.tif

Docket No. Amin, Turocy & Watson, LLP

COMBINED DECLARATION AND ASSIGNMENT FOR U.S. PATENT APPLICATION USING AN APPLICATION DATA SHEET

DECLARATION

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Title: OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM

the application of which is attached hereto unless the following is checked

_____ was filed on _____ as United States application Serial No. _____, or as described and claimed in PCT International Application No. _____filed on _____ and amended on _____ (if any).

The above-identified application was made or authorized to be made by me.

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Gregory Turocy of Amin, Turocy & Watson, LLP at 216-696-8730.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. Section 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

For good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, the undersigned

Name: Tatsumi NAGANUMA **Residence:** Yokohama-shi, Kanagawa, JAPAN

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The undersigned hereby appoint, request, and grant power to the following law firm to insert on this Assignment further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document, for example, the U.S. Serial No. and filing date.

Amin, Turocy & Watson, LLP, 57th Floor - Key Tower, 127 Public Square, Cleveland, Ohio 44114.

Legal name of inventor: Tatsumi NAGANUMA

Inventor's signature: Tatsumi Naganuma Date: Jan. 25, 2019

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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	Application Number	
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
	Art Unit	
	Examiner Name	
	Attorney Docket Number	SAJVP172US

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	1	5852804		1998-12-22	SAKO	

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	1	04-204700	JP		1992-07-27	FUJITSU TEN LIMITED		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	
	Filing Date	2019-03-07
	First Named Inventor	Naganuma
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	Examiner Name	
	Attorney Docket Number	SAJVP172US

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	Attorney Docket Number	SAJVP172US

CERTIFICATION STATEMENT

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

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

OR

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See attached certification statement.

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

☒ None

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	/Greg Turocy/	Date (YYYY-MM-DD)	2019-03-07
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OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims priority from Japanese Application No. 2018-044598, filed on March 12, 2018, the contents of which are incorporated by reference herein in its entirety.

FIELD

[0002] The present application relates to an output-content control device, an output-content control method, and a non-transitory storage medium.

BACKGROUND

[0003] For example, as described in Japanese Examined Patent Application Publication No. H07-109560, voice control devices that analyze detected voice of a user and perform a processing according to an intention of the user have been disclosed. Moreover, voice control devices that output notification indicating that a processing intended by a user has been performed in voice, or that output an inquiry from a user in voice have also been disclosed.

[0004] When a voice processing device that outputs voice is used, there is a case in which a notification from the voice control device in response to an inquiry of a user is heard by people other than the user therearound. In this case, even when it is wished not to be known by people other than the user about the notification from the voice control device, it can be known by people other than the user. Therefore, it has been desired to make a content of notification in response to an inquiry of a user difficult to be understood by people other than the user when the

content of notification is output.

SUMMARY

[0005] An output-content control device, an output-content control method, and a non-transitory storage medium are disclosed.

[0006] According to one aspect, there is provided an output-content control device comprising: a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice; an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user; a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information; and an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein the output-content generating unit is further configured to generate the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

[0007] According to one aspect, there is provided an output-content control method comprising: analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice; analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user; acquiring notification information to be notified to the user based on the intention information; and generating an

output sentence as sentence data to be output to the user based on the notification information, wherein the generating further includes generating the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

[0008] According to one aspect, there is provided a non-transitory storage medium that stores an output-content control program that causes a computer to execute: analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice; analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user; acquiring notification information to be notified to the user based on the intention information; and generating an output sentence as sentence data to be output to the user based on the notification information, wherein the generating further includes generating the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

[0009] The above and other objects, features, advantages and technical and industrial significance of this application will be better understood by reading the following detailed description of presently preferred embodiments of the application, when considered in connection with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a schematic diagram of an output-content control device according to a first embodiment;

FIG. 2 is a schematic block diagram of the output-content control device according to the first embodiment;

FIG. 3 is a table showing an example of intention information;

FIG. 4 is a table showing an example of attribute information;

FIG. 5 is a table showing an example of acquisition information;

FIG. 6 is a table showing an example of relationship information;

FIG. 7 is a flowchart showing a flow of an output processing of output sentence according to the first embodiment;

FIG. 8 is a schematic diagram showing another example of the output-content control device according to the first embodiment; and

FIG. 9 is a schematic block diagram of an information output system according to a second embodiment.

DETAILED DESCRIPTION OF THE PREFERRED EMNODIMENTS

[0011] Embodiments of the present application are explained in detail below with reference to the drawings. The embodiments explained below are not intended to limit the present application.

First Embodiment

[0012] First, a first embodiment is explained. FIG. 1 is a schematic diagram of an output-content control device according to the first embodiment. As shown in FIG. 1, an output-content control device 1 according to the first embodiment detects a voice V1 spoken by a user H by a voice detecting unit 10, analyzes the detected voice V1 to perform a predetermined processing, and outputs a voice V2 by a voice output unit 12. Although the voice V2 is output toward the user H, when other people are present around the output-content control device 1, the voice V2 can be heard

by those people. In this case, even if the voice V2 includes information that the user H wishes not to be known by other people, there is a risk that the voice V2 is heard by people other than the user H and the information is learned by them. The output-content control device 1 according to the present embodiment analyzes the voice V1 and adjusts sentences and the like to be output as the voice V2, and thereby enables to make contents of the voice V2 be understood appropriately only by the user H, and hardly by the people other than the user H.

[0013] FIG. 2 is a schematic block diagram of the output-content control device according to the first embodiment. As shown in FIG. 2, the output-content control device 1 includes the voice detecting unit 10, the voice output unit 12, a lighting unit 14, a controller 16, a communication unit 18, and a storage 20. The output-content control device 1 is a so-called smart speaker (artificial intelligence (AI) speaker), but is not limited thereto as long as the device has functions described later. The output-content control device 1 can be, for example, a smart phone, a tablet, and the like.

[0014] The voice detecting unit 10 is a microphone and detects the voice V1 spoken by the user H. The user H speaks the voice V1 toward the voice detecting unit 10 so as to include information about a processing wished to be performed by the output-content control device 1. The voice detecting unit 10 can be regarded as an input unit that accepts information input externally. The input unit can include a function other than the voice detecting unit 10 and, for example, a switch to adjust volume of the voice V2 by operation performed by the user H, and the like can be provided. The voice output unit 12 is a speaker, and outputs sentences (output sentences described later)

generated by the controller 16 as the voice V2. The lighting unit 14 is a light source, such as a light emitting diode (LED), and is turned on by a control of the controller 16. The communication unit 18 is a mechanism to communicate with external servers, such as a Wi-Fi (registered trade mark) module and an antenna, and communicates information with an external server not shown under control of the controller 16. The communication unit 18 performs communication of information with external servers by wireless communication such as Wi-Fi, but the communication of information with external servers can be performed also by wired communication by cables connected. The storage 20 is a memory that stores information on arithmetic calculation of the controller 16 or programs, and includes, for example, at least one of a random access memory (RAM), a read-only memory (ROM), and an external storage device, such as a flash memory.

[0015] The controller 16 is an arithmetic unit, namely, a central processor (CPU). The controller 16 includes a voice acquiring unit 30, a voice analyzing unit 32, an intention analyzing unit 34, a notification-information acquiring unit 36, a processor 38, an output-content generating unit (voice-content generating unit) 40, a voice classifying unit 42, and an output controller 44. The voice acquiring unit 30, the voice analyzing unit 32, the intention analyzing unit 34, the notification-information acquiring unit 36, the processor 38, the output-content generating unit 40, the voice classifying unit 42, and the output controller 44 perform processes described later by reading software/program stored in the storage 20.

[0016] The voice acquiring unit 30 acquires the voice V1 that is detected by the voice detecting unit 10. The voice analyzing unit 32 performs voice analysis of the voice V1

acquired by the voice acquiring unit 30, to convert the voice V1 into text data. The text data is character data/text data that includes a sentence spoken as the voice V1. The voice analyzing unit 32 detects, for example, amplitude waveform/speech waveform per time from the voice V1. The voice analyzing unit 32 then replaces the amplitude waveform per time with a character based on a table in which a relationship between the amplitude waveforms and the characters is stored, thereby converting the voice V1 into text data. Note that the converting method can be arbitrarily chosen as long as it enables to convert the voice V1 into text data.

[0017] The intention analyzing unit 34 acquires the text data that is generated by the voice analyzing unit 32, and detects intention information I based on the text data. The intention information I is information indicating an intention of the user H, namely, an intent. In other words, the intention information I is information that indicates what kind of processing is intended by the user H to be performed on the output-content control device 1, and is information that indicates what kinds of information the user H wishes to obtain in the present embodiment.

[0018] The intention analyzing unit 34 extracts the intention information I from the text data by using, for example, a natural language processing. In the present embodiment, the intention analyzing unit 34 detects the intention information I from the text data based on multiple pieces of training data stored in the storage 20. The training data herein is data in which the intention information I has been assigned to text data in advance. That is, the intention analyzing unit 34 extracts the training data that is similar to the text data generated by the voice analyzing unit 32, and regards the intention

information I of the extracted training data as the intention information I of the text data generated by the voice analyzing unit 32. Note that the training data is not necessarily required to be stored in the storage 20, and the intention analyzing unit 34 can search for the training data in an external server by controlling the communication unit 18. As long as the intention analyzing unit 34 extracts the intention information I from text data, the extracting method of the intention information I can be arbitrarily chosen. For example, the intention analyzing unit 34 can read a relationship table of keywords and the intention information I stored in the storage 20, and can extract the intention information I that is associated with the keyword when the keyword in the relationship table is included in text data.

[0019] FIG. 3 is a table showing an example of the intention information. For example, when text data is a sentence "today's schedule is", the intention analyzing unit 34 recognizes that a processing of informing about a schedule to the user H corresponds to the processing requested by the user H, that is, the intention information I, by performing analysis as described above. That is, the intention analyzing unit 34 detects that the information that the user wishes to acquire, that is, the intention information I, is a schedule.

[0020] The detecting method of the intention information I using text data can be arbitrarily chosen, not limited thereto. For example, the output-content control device 1 can be configured to store relationship table of keywords and the intention information I in the storage 20, and to detect the intention information I associated with the keyword when the keyword is included in text data of the voice V1 spoken by the user H. As an example of this case,

a keyword "*konnichiwa*" may be associated with weather information and information of news. In this case, when the user H speaks the voice V1 "*konnichiwa*", the intention analyzing unit 34 detects the weather information and information of news as the intention information I.

[0021] The notification-information acquiring unit 36 acquires notification information that is a content of information to be given to the user H based on the intention information I. As shown in FIG. 2, the notification-information acquiring unit 36 includes an attribute-information acquiring unit 50 that acquires attribute information E, and an acquisition-information acquiring unit 52 that acquires acquisition information A. The notification information is information including the attribute information E and the acquisition information A.

[0022] The attribute-information acquiring unit 50 acquires the attribute information E based on the intention information I. The attribute information E is information that is associated with the intention information I, and is information that indicates a condition necessary for acquiring information that the user H wishes to acquire. Namely, the attribute information E is an entity. For example, even if it is determined that the intention information I is a schedule, the output-content control device 1 cannot determine which and whose schedule to notify when a condition to further specify the intention information I are unknown. In this case, the output-content control device 1 cannot provide notification according to the intention of the user H. For this, the attribute-information acquiring unit 50 acquires the attribute information E as a condition to further specify the intention information I to enable to determine which and whose schedule to notify.

[0023] FIG. 4 is a table showing an example of the attribute information. The attribute information E includes attribute type information E0 and attribute content information E1. The attribute type information E0 is information indicating types of condition, that is, what kinds of conditions they are, and in other words, it is information in which conditions to further specify the intention information I are classified. The attribute content information E1 is a content of the attribute type information E0. Therefore, the attribute type information E0 can be regarded as information indicating the types of the attribute content information E1. Therefore, the attribute type information E0 and the attribute content information E1 are associated with each other. As shown in FIG. 4, for example, when the attribute type information E0 includes “person” as one of the types of conditions, the attribute content information E1 associated therewith is to be information specifying a name of the person (in this example, "Mr. Yamada"). Furthermore, as the example shown in FIG. 4, when the attribute type information E0 includes “date” as one of the types of conditions, the attribute content information E1 associated therewith is to be information indicating a date (in this example, March 20, 2020). By thus setting the attribute content information E1, it becomes certain that, for example, the schedule of Mr. Yamada on March 20, 2020 should be notified. In the example of the present embodiment, Mr. Yamada is the user H himself.

[0024] In the present embodiment, the attribute-information acquiring unit 50 detects the attribute type information E0 from the extracted intention information I. The attribute-information acquiring unit 50 reads a relationship table of the intention information I and the

attribute type information E0 stored in the storage 20, and detects the intention information I that coincides with the intention information I detected by the intention analyzing unit 34 from the relationship table. The attribute-information acquiring unit 50 then extracts and acquires the attribute type information E0 that is associated with the intention information I coincident with the intention information I detected by the intention analyzing unit 34. For example, when the intention information I is a schedule, a person and a date are included in the relationship table as the attribute type information E0 associated with a schedule. In this case, the attribute-information acquiring unit 50 extracts two pieces of information of a person and of a date as the attribute type information E0. As above, two pieces of the attribute type information E0 that correspond to one piece of the intention information I are present in this example, but the number of pieces of the attribute type information E0 corresponding to one piece of the intention information I may be different depending on the content of the intention information I. That is, the number of pieces of the attribute type information E0 corresponding to one piece of the intention information I can be one, or three or more. Moreover, the intention analyzing unit 34 reads the relationship table from the storage 20, but a source of the relationship table to be read from can be any source and, for example, the relationship table can be acquired from an external server by communicating with the external server/external device not shown through the communication unit 18.

[0025] Having acquired the attribute type information E0, the attribute-information acquiring unit 50 sets the attribute content information E1 for each of the attribute type information E0. The attribute-information acquiring

unit 50 extracts, for example, the attribute content information E1 from the text data generated by the voice analyzing unit 32. For example, when a keyword "today" is included in the text data generated from the voice V1, the attribute content information E1 corresponding to the attribute type information E0 of a date is set to today's date ("March 20, 2020 in the example of FIG. 4). Furthermore, the attribute-information acquiring unit 50 can set the attribute content information E1 corresponding to the attribute type information E0 in advance. In this case, when the intention information I is a schedule, for example, setting data indicating that the attribute content information E1 is a content determined in advance is stored in the storage 20. That is, for example, it is stored in advance that the attribute content information E1 corresponding to the attribute type information E0 of a person is "Mr. Yamada" in the storage 20. By this, the attribute-information acquiring unit 50 can set the attribute content information E1 of a person even when a keyword representing a person is not included in the text data. Moreover, the attribute-information acquiring unit 50 can set the attribute content information E1 by communicating with an external server by the communication unit 18. For example, when one of the attribute type information E0 is a location, the intention analyzing unit 34 can acquire a current position using a global positioning system (GPS) by communication, and can set it as the attribute content information E1. Moreover, the output-content control device 1 can output a notification to prompt the user H to provide information of the attribute content information E1. In this case, for example, the attribute-information acquiring unit 50 selects the attribute type information E0 for which

acquisition of the attribute content information E1 is required, and causes the output-content generating unit 40 to generate a sentence to request the user H to give the attribute content information E1 for the output-content generating unit 40. For example, in the case of the attribute type information E0 of a date, the output-content generating unit 40 generates a sentence "Please provide a date for which the schedule is wished to be notified", or the like. Subsequently, the output controller 44 causes the voice output unit 12 to output this sentence. Thus, the user H speaks, for example, a voice indicating that the date is today, and the voice is analyzed by the voice analyzing unit 32, and the attribute-information acquiring unit 50 acquires information indicating that one of the attribute content information E1 is “today”.

[0026] FIG. 5 is a table showing an example of acquisition information. The acquisition-information acquiring unit 52 shown in FIG. 2 acquires the acquisition information A based on the intention information I and the attribute information E. The acquisition information A is information according to an intention of the user H and is, in other words, information that the user H wishes to acquire. The acquisition information A includes the acquisition type information A0 and acquisition content information A1. The acquisition type information A0 is information that indicates what kind of information the user H wishes to acquire and is, in other words, information in which information desired by the user H is classified. The acquisition content information A1 indicates a content of the acquisition type information A0. That is, the acquisition type information A0 can be regarded as information indicating the type of the acquisition content information A1. Therefore, the

acquisition type information A0 and the acquisition content information A1 are associated with each other. As shown in FIG. 5, for example, when the acquisition type information A0 includes “location” as one the type of information that the user H wishes to acquire, the acquisition content information A1 associated therewith is to be information indicating the location ("Tokyo building" in the example of FIG. 5).

[0027] In the present embodiment, the acquisition-information acquiring unit 52 detects the acquisition type information A0 from the intention information I. The acquisition-information acquiring unit 52 reads a relationship table of the intention information I and the acquisition type information A0 stored in the storage 20, and detects the intention information I that coincides with the intention information I detected by the intention analyzing unit 34 from the relationship table. The acquisition-information acquiring unit 52 then extracts and acquires the acquisition type information A0 that is associated with the intention information I that coincides with the intention information I detected by the intention analyzing unit 34 from the relationship table. For example, when the intention information I is a schedule, the relationship table includes a location, a time, what to do, and a person as the acquisition type information A0 associated with a schedule. In this case, the acquisition-information acquiring unit 52 extracts four pieces of information, a location, a time, what to do, and a person as the acquisition type information A0. As above, four pieces of the acquisition type information A0 that correspond to one piece of the intention information I are present in this example, but the number of the acquisition type information A0 corresponding to one piece of the

intention information I may be different depending on the content of the intention information I. That is, the number of pieces of the acquisition type information A0 corresponding to one piece of the intention information I can be one, or three or more. Moreover, the acquisition-information acquiring unit 52 reads the relationship table from the storage 20, but a source of the relationship table to be read from can be any source and, for example, the relationship table can be acquired from an external server by communicating with the external server/external device not shown through the communication unit 18.

[0028] After having acquired the acquisition type information A0, the acquisition-information acquiring unit 52 acquires the acquisition content information A1 for each of the acquisition type information A0. The acquisition-information acquiring unit 52 acquires the acquisition content information A1 for each of the acquisition type information A0 for the attribute content information E1. That is, the acquisition-information acquiring unit 52 acquires the acquisition content information A1 under the condition of the attribute content information E1, for each of the acquisition type information A0. The acquisition-information acquiring unit 52 acquires, when the acquisition content information A1 is included in the storage 20, the acquisition content information A1 from the storage 20. Moreover, the acquisition-information acquiring unit 52 can acquire the acquisition content information A1 from an external server for each of the acquisition type information A0, by communicating with the external server/external device by the communication unit 18. That is, it can be said that the acquisition content information A1 is data that is acquired by the acquisition-information acquiring unit 52 from a database in an

external server, the storage 20, and the like.

[0029] In this example, the acquisition-information acquiring unit 52 acquires the acquisition content information A1 based on the condition, Mr. Yamada's schedule on March 20, 2020. In this case, for example, the acquisition-information acquiring unit 52 reads information about Mr. Yamada's schedule on March 20, 2020 by communicating with a terminal serving as the external server that stores Mr. Yamada's schedule, or by reading Mr. Yamada's schedule stored in the storage 20 for each of the acquisition type information A0. Herein, a case in which Mr. Yamada's schedule on March 20, 2020 is a meeting with Mr. Yoshida from 15 o'clock at Tokyo building is taken as an example. In this case, the acquisition-information acquiring unit 52 acquires information indicating "Tokyo building" as the acquisition content information A1 corresponding to a location in the acquisition type information A0, acquires information indicating "15 o'clock." as the acquisition content information A1 corresponding to a time in the acquisition type information A0, acquires information indicating "meeting" as the acquisition content information A1 corresponding to what to do in the acquisition type information A0, and acquires information indicating "Mr. Yoshida" as the acquisition content information A1 corresponding to a person in the acquisition type information A.

[0030] The acquisition-information acquiring unit 52 thus acquires the acquisition content information A1 that indicates a content of information that the user H wishes to acquire for each of the acquisition type information A0. The output-content generating unit 40 can notify about the information that the user H wishes to acquire by generating a sentence including this acquisition content information

A1 as an output sentence to be notified to the user H. It should be noted that the output sentence to be notified to the user H may be include not only the acquisition content information A1 but also the attribute content information E1. Specifically, while a sentence that only includes the acquisition content information A1 is to be "Meeting with Mr. Yoshida from 15 o'clock at Tokyo building", a sentence that includes also the attribute content information E1 is to be "Mr. Yamada's schedule on March 20, 2020 is a meeting with Mr. Yoshida from 15 o'clock at Tokyo building", and is easier to understand the content. That is, the information to be notified to the user may include the acquisition content information A1 and the attribute content information E1. Therefore, hereinafter, the attribute information E and the acquisition information A are referred to as notification information appropriately.

[0031] Moreover, it can be said that the notification information includes type information and content information. It can be said that the content information includes the attribute content information E1 and the acquisition content information A1, and indicates a content of information to be notified to the user H. Furthermore, it can be said that the type information represents the attribute type information E0 and the acquisition type information A0, indicates a type of information to be notified to the user, and indicates a type of the content information. It can be said that the notification-information acquiring unit 36 shown in FIG. 2 acquires the type information and the content information as the notification information.

[0032] The notification-information acquiring unit 36 performs a processing to acquire information that the user H wishes to acquire when a content of the intention

information I indicates that the user H requests for notification of information. On the other hand, there is a case in which the user H requests the output-content control device 1 to control another device, other than requesting for the notification of information. For example, the user H can speak the voice V1 of "Turn on the light in the kitchen". In this case, the intention analyzing unit 34 detects the intention information I of controlling a device. The processor 38 shown in FIG. 2 then detects, based on this intention information I, "kitchen" as the attribute content information E1 corresponding to a location in the attribute type information E0, "light" as the attribute content information E1 corresponding to a target device in the attribute type information E0, and "turn on" as the attribute content information E1 corresponding to an operation in the attribute type information E0, and performs a control of turning on the light of the kitchen based on the attribute content information E1. In this case, the output-content generating unit 40 generates an output sentence, "Yes, the operation is completed", and the output controller 44 causes the voice output unit 12 to output this output sentence. However, the output-content control device 1 should only be one that notifies about information that the user H wishes to acquire, and a processing of controlling another device as described above may be not required to be performed.

[0033] Referring back to FIG. 2, the output-content generating unit 40 generates an output sentence based on the notification information, more specifically, the attribute content information E1 and the acquisition content information A1, acquired by the notification-information acquiring unit 36. The output sentence is data

of a sentence for the voice V2 to be output by the voice output unit 12, that is, text data. It can be said that the output sentence is dialog data. The output-content generating unit 40 includes a first output-content-generating unit 60 that generates a first output sentence as the output sentence, and a second output-content-generating unit 62 that generates a second output sentence as the output sentence. The voice classifying unit 42 is explained before explaining about the first output-content-generating unit 60 and the second output-content-generating unit 62.

[0034] The voice classifying unit 42 analyzes the voice V1 acquired by the voice acquiring unit 30, and determines whether the voice is a predetermined voice. In the present embodiment, the voice classifying unit 42 analyzes the voice V1 acquired by the voice acquiring unit 30, and classifies the voice V1 to either one of a first voice V1A and a second voice V1B. The first voice V1A corresponds to a predetermined voice. In the present embodiment, the voice classifying unit 42 classifies the voice V1 to the first voice V1A when the voice V1 is determined to be a whisper as a result of analysis (determines as the predetermined voice). The voice classifying unit 42 classifies the voice V1 to the second voice V1B when the voice V1 is determined not to be a whisper. A whisper is an unvoiced voice spoken without vibrating the vocal chords, but it is not limited to the unvoiced voice spoken without vibrating the vocal chords as long as being classified to the first voice V1A by, for example, a method described later.

[0035] For example, the voice classifying unit 42 acquires a time waveform of intensity of the voice V1, and performs Fourier-transformation on the time waveform,

thereby acquiring a spectrum that indicates intensity of the voice V1 per frequency. The voice classifying unit 42 classifies the voice V1 either to the first voice V1A or the second voice V1B by using a peak frequency that is equal to or higher than a predetermined intensity in the spectrum as a feature value. For example, the voice classifying unit 42 determines the voice as a whisper to classify to the first voice V1A when the peak frequency is equal to or lower than the threshold, and determines the voice as not a whisper to classify to the second voice V1B when the peak frequency is larger than the threshold. Note that the voice classifying unit 42 can perform the classification to the first voice V1A and the second voice V1B by using any method. For example, the voice classifying unit 42 can perform the classification to the first voice V1A and the second voice V1B by using a slope of the peak in the spectrum as a feature value. Moreover, the voice classifying unit 42 can perform the classification to the first voice V1A and the second voice V1B by using either one of a volume of the voice V1, a speaking speed of the user in the voice V1, and a volume ratio between a speech of a person and a wind noise as a feature value. Furthermore, a proximity sensor can be provided in the output-content control device 1, a distance between the user H and the output-content control device 1 is calculated from a detection result of the proximity sensor, and the distance can be used as a feature value to perform the classification to the first voice V1A and the second voice V1B. Moreover, the voice classifying unit 42 can derive a Mel-frequency cepstrum coefficient as a feature value, and can perform the classification to the first voice V1A and the second voice V1B based on the mel-frequency cepstrum coefficient. In these cases, the voice

classifying unit 42 sets a threshold of the feature value, and classifies the voice V1 to either the first voice V1A or the second voice V1B based on whether the feature value exceeds the threshold.

[0036] As described above, the voice classifying unit 42 classifies the voice V1 by using the voice V1 that is acquired by the voice acquiring unit 30. That is, the voice classifying unit 42 classifies the voice V1 to the first voice V1A when the voice V1 is a whisper, and to the second voice V1B when the voice V1 is not a whisper even when meaning of the voice V1 is the same.

[0037] Moreover, the voice classifying unit 42 is not limited to perform the classification to the first voice V1A or the second voice V1B, using the voice V1. The classification can be performed by generating text data of the voice V1 by performing character analysis of the voice V1 that is acquired by the voice acquiring unit 30, and by using the text data of the voice V1. For example, the voice classifying unit 42 can classify the voice V1 not by judging whether the voice is a whisper, but based on a keyword included in the voice V1. That is, the voice classifying unit 42 can classify the voice V1 to the first voice V1A when a keyword stored in the storage 20 is included in the voice V1, and to the second voice V1B when the keyword stored in the storage 20 is not included.

[0038] The voice classifying unit 42 can use either one of the classification methods explained above, or can perform the classification by combining the classification methods explained above.

[0039] The output-content generating unit 40 causes the second output-content-generating unit 62 to generate the second output sentence when the voice classifying unit 42 classifies the voice V1 to the second voice V1B. That is,

the output-content generating unit 40 generates the second output sentence, not generating the first output sentence when the voice V1 is classified to the second voice V1B. The second output-content-generating unit 62 generates a sentence that includes all pieces of information of the attribute content information E1 acquired by the attribute-information acquiring unit 50, the acquisition content information A1 acquired by the acquisition-information acquiring unit 52, and the intention information I acquired by the intention analyzing unit 34, as the second output sentence. That is, the second output sentence is text data that includes all of the attribute content information E1, the acquisition content information A1, and the intention information I.

[0040] Furthermore, it can be said that the second output sentence is text data that includes words indicating a content of the intention information I, words indicating a content of the attribute content information E1, and words indicating a content of the acquisition content information A1. The word indicating the content of the intention information I herein is a noun "schedule". Moreover, the words indicating the content of the attribute content information E1 herein are a noun (more specifically, a proper noun) "Mr. Yamada" and a word "March 20, 2020" which includes numeric values. Furthermore, the words indicating the content of the acquisition content information A herein include nouns (more specifically, proper nouns) "Tokyo building", "Mr. Yoshida", a noun "meeting", and a numeric value "15 o'clock". It can be said that the second output sentence is text data that includes all of these words. Specifically, the second output sentence in this example is to be "Mr. Yamada's schedule on March 20, 2020 is a meeting with Mr. Yoshida

from 15 o'clock at Tokyo building". Note that the second output sentence is not required to include all of the words indicating the contents of the intention information I, the attribute content information E1, and the acquisition content information A1, and can exclude at least either one of the words indicating the content of the intention information I, the attribute content information E1, and the acquisition content information A1. The second output sentence is different from the first output sentence described later, and the words indicating the content of the intention information I, the attribute content information E1, and the acquisition content information A1 should not be replaced with other words.

[0041] On the other hand, the output-content generating unit 40 causes the first output-content-generating unit 60 to generate the first output sentence when the voice V1 is classified into the first voice V1A by the voice classifying unit 42. That is, the output-content generating unit 40 generates the first output sentence when the voice V1 is classified into the first voice V1A, not generating the second output sentence. The first output-content-generating unit 60 generates a sentence in which a word selected from among words included in the content information (the attribute content information E1 and the acquisition content information A1) is replaced with another word, as the first output sentence. Specifically, the first output-content-generating unit 60 acquires words indicating the intention information I, words indicating the content of the attribute content information E1, and words indicating the content of the acquisition content information A1. Subsequently, the first output-content-generating unit 60 selects a word to be replaced with another word from among the words indicating the content of

the intention information I, the attribute content information E1, and the acquisition content information A1. The first output-content-generating unit 60 then replaces the selected word with the other word, leaving the not-selected words without replacing with the other word. Therefore, the first output sentence is to be a sentence that includes words that has not been replaced with other words among words indicating the content of the intention information I, the attribute content information E1, and the acquisition content information A1, and a word that has been replaced with the other word among the words indicating the content of the intention information I, the attribute content information E1, and the acquisition content information A1. As described above, in the present embodiment, a word to be replaced is selected from the notification information that includes the attribute content information E1 and the acquisition content information A1. Note that the first output-content-generating unit 60 can select a word to be replaced also from the intention information I, regarding the intention information I also as the notification information.

[0042] It is preferable that the first output-content-generating unit 60 select a noun, more preferably, a proper noun as a word to be replaced. However, also a verb or a numeric value can be selected as a word to be replaced. Note that when a word to be replaced is a noun, a word after replacement is preferable to be a noun also, and when a word to be replaced is a verb, a word after replacement is preferable to be a verb also, and when a word to be replaced is a numeric value, a word after replacement is preferable to be a numeric value also. By thus keeping parts of speech consistent before and after the replacement, it is suppressed that the first output sentence after the

replacement becomes difficult even for the user H.

[0043] Content information and replacement information are associated with each other. In other words, the attribute content information E1 and the attribute type information E0 are associated with each other, for example, as "Mr. Yamada" and "person" shown in FIG. 4, and also the acquisition content information A1 and the acquisition type information A0 are associated with each other, for example, as "meeting" and "what to do" shown in FIG. 5. The first output-content-generating unit 60 selects a word to be replaced with another word based on words included in the attribute content information E1 and on the attribute type information E0 associated with the attribute content information E1. Similarly, the first output-content-generating unit 60 selects a word to be replaced with another word based on words included in the acquisition content information A1 and on the acquisition type information A0 associated with the acquisition content information A1. In the following, it is more specifically explained.

[0044] FIG. 6 is a table showing an example of relationship information. The storage 20 has the relationship information as shown in FIG. 6 stored therein as a table in advance. The relationship information herein is information in which a word to be replaced (first word) and a replacing word (second word) that is a word after replacement are associated with each other. The replacement information includes multiple words to be replaced different from one another, and one replacing word is associated with one word to be replaced. That is, the relationship information has multiple sets of the word to be replaced and the replacing word. The replacing word is different per the word to be replaced, that is, different

per set. Although the word to be replaced and the replacing word are both nouns in this example, they can be verbs or numeric values. However, it is preferable that the replacing word be a noun when the word to be replaced is a noun, that the replacing word be a verb when the word to be replaced is a verb, and that the replacing word be a numeric value when the word to be replaced is a numeric value.

[0045] Moreover, the relationship information includes type information that represents a type information indicated by the word to be replaced. The relationship information includes sets of a word to be replaced and a replacing word per type information. For example, in the example in FIG. 6, the type information is what to do. Therefore, in the example in FIG. 6, the relationship information includes a set of the word to be replaced "meeting" and the replacing word "hospital visit", and a set of the word to be replaced "dinner" and the replacing word "meeting" for the type information of "what to do". Note that although the number of sets per the type information is two in the example in FIG. 6, it can be any number. Moreover, although the example in which the type information is "what to do" is shown in the example in FIG. 6, respective sets of the word to be replaced and the replacing word for multiple kinds of the type information can be included.

[0046] The first output-content-generating unit 60 reads the relationship information as described above from the storage 20. The first output-content-generating unit 60 then detects whether a type information matched with the acquisition type information A0 associated with the content information (for example, "what to do" in FIG. 5) is present in the relationship information. Subsequently,

when the matched type information is present in the relationship information, the first output-content-generating unit 60 detects whether a word included in the acquisition content information A1 associated with the acquisition type information A0 (for example, "meeting" in FIG. 5) is included in the relationship information as a word to be replaced (for example, "meeting" in FIG. 6). The first output-content-generating unit 60, when the word included in the acquisition content information A1 is included in the relationship information as a word to be replaced, selects and replaces the word to be replaced with a word being associated thereto. That is, when the type information of the word included in the content information matches with the type information of the word to be replaced and also the word included in the content information matches with the word to be replaced, the first output-content-generating unit 60 selects the word included in the content information as a word to be replaced with another word. The first output-content-generating unit 60 then replaces the selected word with a replacing word being associated therewith. Note that it is preferable that even if either one of the matching of the type information and the matching of the word is determined, the first output-content-generating unit 60 should not select and replace the word included in the content information as a word to be replaced with another word.

[0047] In this example, because the type information in the relationship information is "what to do", it matches with the type information (the acquisition type information A0) "what to do" shown in FIG. 5. Furthermore, in this example, the content information (the acquisition content information A1) for the type information "what to do" is "meeting" as shown in FIG. 5, and the word to be replaced

for the type information "what to do" includes "meeting", which matches therewith. Therefore, in this example, the matching of the type information "what to do" is determined, and the matched word is "meeting". Therefore, the word "meeting" for the acquisition type information A0 "what to do" shown in FIG. 5 is replaced with a replacing word "hospital visit". Moreover, in this example, since there is no content information with both the matched type information and the matched word except the word "meeting", no other words are replaced. Therefore, in this example, the first output-content-generating unit 60 generates a sentence "Mr. Yamada's schedule on March 20, 2020 is dinner with Mr. Yoshida from 15 o'clock at Tokyo building" as the first output document, in which "meeting" is replaced with "dinner".

[0048] In this explanation, the storage 20 stores the relationship information as a table. That is, the relationship information is information that is set in advance. However, the relationship information is not limited to that stored in the storage 20. The first output-content-generating unit 60 can generate relationship information from information relating to the user H (Mr. Yamada herein). For example, when information relating to the user H is stored in the output-content control device 1 or other devices owned by the user H, the first output-content-generating unit 60 reads the information and generates the relationship information from the information.

[0049] For example, there is a case in which a contact list including names of persons is set in the output-content control device 1 or other devices owned by the user H, and different names (nickname or the like) are designated to the names of the persons by the user H. In this case, the first output-content-generating unit 60

reads the names and the designated different names of the person from the contact list to generate the relationship information. That is, in this case, the first output-content-generating unit 60 generates the relationship information "person" as the type information, and sets the name of the person as the word to be replaced in the relationship information (for example, Mr. Yoshida), and sets the designated different name (for example, Yoshi) as the replacing word that has been set for the person. In this case, both the type information and the word in the acquisition content information A1 of "Mr. Yoshida" shown in FIG. 5 matches with those in the relation information. Therefore, "Mr. Yoshida" is replaced with "Yoshi" as the replacing word. In this case, the first output sentence is to be "Mr. Yamada's schedule on March 20, 2020 is a meeting with Yoshi from 15 o'clock at Tokyo building".

[0050] Moreover, for example, there is a case in which a map application or an address book is stored in the output-content control device 1 or other devices owned by the user H, and different names are designated to addresses or buildings included therein by the user H. In this case, the first output-content-generating unit 60 reads the names of the addresses or the buildings from the map application or the address book to generate relationship information. That is, in this case, the first output-content-generating unit 60 generates the relationship information "location" as the type information, and sets the address or the building (for example, Tokyo building) as the word to be replaced in the relationship information, and sets the designated different name as the replacing word (for example, T bldg.) that has been set for the address or the building. In this case, both the type information and the word in the acquisition content information A1 of "Tokyo

building" shown in FIG. 5 matches with those in the relation information. Therefore, "Tokyo building" is replaced with "T bldg." as the replacing word. In this case, the first output sentence is to be "Mr. Yamada's schedule on March 20, 2020 is a meeting with Mr. Yoshida from 15 o'clock at T bldg."

[0051] When the output-content control device 1 has the relationship information stored therein as a table, the output-content control device 1 can add relationship information newly generated based on the information relating to the user H as described above to the table.

[0052] As described above, the relationship information is understandable for the user H but difficult for people other than the user H since the word to be replaced and the replacing word are set in advance. Therefore, when the first output sentence is output in voice, the content is understandable for the user H, but is difficult to be understood by the people other than the user H, thereby enabling to suppress the information being known by people other than the user H. Furthermore, the first output-content-generating unit 60 replaces a word with another when the type information in the content information matches with that in the relationship information. Therefore, when there is a word having different type information, that is, when there is a word, the meaning of which is different but reading of which is the same, the first output-content-generating unit 60 avoids the word being replaced, to suppress the first output sentence after replacement becoming difficult for the user H. However, the first output-content-generating unit 60 can replace the word as long as the word in the content information matches with that in the relationship information, even if the type information in the content information does not match with

that in the relationship information.

[0053] Moreover, although the first output-content-generating unit 60 replaces a word using the relationship information in which the words to be replaced and the replacing words are set in advance in the above explanation, it is not necessarily required to use such relationship information for the replacement of the word. For example, the first output-content-generating unit 60 may replace a word included in content information with a word of a broader term of the word. The word of a broader term means that the word includes other words, and more specifically, the word is a more general, more generic, or more abstract term. That is, when the word included in the content information is replaced with a word of a broader term, the words other than the word included in the content information which are included in the word of the broader term can be replaced. Therefore, people other than the user H cannot infer the word included in the content information before the replacement even if they hear the word of the broader term, and it is possible to suppress the information from being known by people other than the user H. On the other hand, the user H can infer the word included in the content information before the replacement by hearing the word of the broader term because the user H is often aware of the word included in the content information in the first place, and can understand the content. In this case, the first output-content-generating unit 60 can also perform the replacement based on the type information. That is, the first output-content-generating unit 60 replaces the word included in the content information with the word of the broader term when the word included in the content information can be replaced with the broader term (for example, in the case of a proper noun

as described later) and the type information associated with the content information corresponds to predetermined type information set in advance.

[0054] For example, when the word included in the content information is a proper noun, the first output-content-generating unit 60 replaces the word with an initial of the proper noun. That is, the initial is regarded to be a broader term of the proper noun. In this case, the first output-content-generating unit 60 can also perform the replacement based on the type information. That is, the first output-content-generating unit 60 replaces the word (proper noun) with the initial when the word included in the content information is a pronoun, and when the type information associated with the content information corresponds to predetermined type information set in advance, for example, when it corresponds to the type information relating to a name of "person", "company name", "store name", and the like. In this case, for example, the first output sentence is to be "Mr. Y's schedule on March 20, 2020 is a meeting with Mr. Y from 15 o'clock at Tokyo building".

[0055] Moreover, for example, when the type information associated with the content information is a location, the first output-content-generating unit 60 replaces the word included in the content information with a name of facilities located near the place in the content information, a name of an area (town, ward, or street) to which the building or the address in the content information belongs, or the like. That is, the name of the facilities located in neighborhood or the name of the area is regarded as the broader term. For example, when "Tokyo building" shown in FIG. 5 is replaced with "Tokyo station", the first output sentence is to be "Mr. Yamada's schedule

on March 20, 2020 is a meeting with Mr. Yoshida from 15 o'clock near Tokyo station".

[0056] The first output-content-generating unit 60 generates a sentence in which a word selected from among words included in the content information is replaced with another word as the first output sentence as described above when a voice is classified into the first voice V1A. The methods of replacing words explained above can be combined to be used, or only either one can be used. By combining the methods, it is possible to make it more difficult for other people to understand the output sentence.

[0057] Referring back to FIG. 2, the output controller 44 acquires the output sentences generated by the output-content generating unit 40, that is, the first output sentence or the second output sentence. The output controller 44 converts the output sentences in text data into voice data, and causes the voice output unit 12 to output the voice data as the second voice V2. Moreover, the output controller 44 can control the lighting unit 14 to turn on a light when the voice V2 is output, when the processing by the processor 38 is completed, when the voice V1 is detected, or the like.

[0058] The controller 16 has a configuration as described above. A flow of output processing of an output sentence by the controller 16 is explained based on a flowchart. FIG. 7 is a flowchart showing a flow of output processing of output sentence according to the first embodiment. As shown in FIG. 7, the controller 16 acquires input voice, that is voice data of the voice V1 by the voice acquiring unit 30 (step S10). The controller 16 causes the voice analyzing unit 32 to analyze the voice data of the voice V1 acquired by the voice acquiring unit

30, and generates text data (step S12). Subsequently, the controller 16 causes the intention analyzing unit 34 to detect the intention information I from the text data (step S14), and causes the attribute-information acquiring unit 50 to derive the attribute information E based on the intention information I (step S16). The attribute-information acquiring unit 50 acquires the attribute type information E0 and the attribute content information E1 based on the intention information I. After having derived the attribute information E, the controller 16 causes the acquisition-information acquiring unit 52 to acquire the acquisition information A, that is the acquisition type information A0 and the acquisition content information A1 based on the intention information I and the attribute information E (step S18). Moreover, when the input voice, namely the voice V1, is acquired at step S10, the controller 16 causes the voice classifying unit 42 to classify the voice V1 to either one of the first voice V1A and the second voice V1B (step S22).

[0059] The controller 16 determines whether the voice V1 is the first voice V1A (step S24), and when it determines that the voice V1 is the first voice V1A (step S24: YES), causes the first output-content-generating unit 60 to generate the first output sentence (step S26). On the other hand, when it determines that the voice V1 is not the first voice V1A (step S24: NO), that is, the voice V1 is the second voice V1B, the controller 16 causes the second output-content-generating unit 62 to generate the second output sentence (step S28). After having generated the output sentence, that is, the first output sentence or the second output sentence, the controller 16 causes the output controller 44 to output the output sentence as the voice V2 by the voice output unit 12 (step S30), and ends the

processing. That is, when the first output sentence is generated, the output controller 44 converts the first output sentence into voice data, and causes the voice output unit 12 to output it as the voice V2. When the second output sentence is generated, the output controller 44 converts the second output sentence into voice data, and causes the voice output unit 12 to output it as the voice V2.

[0060] As explained above, the output-content control device 1 according to the present embodiment includes the voice classifying unit 42, the intention analyzing unit 34, the notification-information acquiring unit 36, and the output-content generating unit 40. The voice classifying unit 42 analyzes the voice V1 spoken by the user H and acquired by the voice acquiring unit 30, and determines whether the voice V1 is a predetermined voice (the first voice V1A). The intention analyzing unit 34 analyzes the voice V1 acquired by the voice acquiring unit 30, and detects the intention information I that indicates what kind of information the user H wishes to acquire. The notification-information acquiring unit 36 acquires the notification information that is information to be notified to the user H based on the intention information I. The output-content generating unit 40 generates the output sentence that is sentence data to be output to the user H, based on the notification information. The output-content generating unit 40 generates the output sentence in which a word selected from among words included in the notification information is replaced with another word (the first output sentence) when the voice V1 is classified into the first voice V1A, that is, determined as the predetermined voice.

[0061] The voice V2 output as the voice data of the output sentence is output toward the user H, but can be

heard by people other than the user H around the output-content control device 1 as described above. However, it can be preferable that the content of the voice V2 be not known by anyone other than the user H, for example, considering privacy. When the user H does not want other people to know the content of the voice V2, that is, the content of the output sentence from the output-content control device 1, the user H changes the voice V1 into the voice V1 in whispers even when speaking the same content. The output-content control device 1 determines that it is required to avoid the content being known by people other than the user H when the voice V1 classified into the first voice V1A is detected, and generates the first output sentence for the voice V2. In the first output sentence, the content information, that is, a word included in the content to be notified to the user H (information that the user H wishes to know) is replaced with another word. Thus, it becomes difficult to understand the meaning of the first output sentence for the people other than the user H as the replacement of the word with the other word is performed, thereby enabling to make the content difficult to be understood by the people other than the user H.

[0062] Furthermore, the output-content generating unit 40 generates the second output sentence in which a word included in the notification information is not replaced when the voice V1 is classified into the second voice V1B. The output-content control device 1 analyzes the voice V1 of the user, and determines that it can be known by the people other than the user H when the voice V1 that is classified into the second voice V1B is detected, and generates the second output sentence without replacing a word. Thus, it is possible to suppress the replacement of a word when it is not required.

[0063] Moreover, the notification-information acquiring unit 36 acquires the content information that is the content of information to be notified to the user H, and the type information that indicates a type of the content information, as the notification information. The output-content generating unit 40 selects a word to be replaced with another word based on the word included in the content information and the type information that is associated with the content information. When a word included in the content information is replaced with another word, it may become difficult to be understood also by the user H. Thus, the output-content control device 1 selects a word to be replaced, based on the information to be notified and the type of the information, and the random replacement of the word is thereby suppressed, and it is prevented from making it difficult for the user H to understand the output sentence.

[0064] Moreover, the output-content generating unit 40 reads relationship information including information about a word to be replaced (first word) being a predetermined word, and a replacing word (second word) associated with the word to be replaced (first word). The output-content generating unit 40 replaces the word included in the notification information with the replacing word (second word) when the word included in the notification information matches with the word to be replaced (first word). Since the word to be replaced and the replacing word are set in advance in the relationship information, it is possible for the user H to recognize the output sentence but is difficult for the people other than the user H to recognize the output sentence. Therefore, the output-content control device 1 can suppress information being known by the people other than the user H appropriately,

keeping the content thereof understandable for the user H, because the replacement with the replacing word is performed as described above.

[0065] Moreover, the relationship information also includes information of the type information that indicates a type of the word to be replaced (first word). The output-content generating unit 40 selects a word included in the notification information as a word to be replaced with another word when the type information of the word included in the notification information and the type information of the word to be replaced (first word) match with each other and the word included in the notification information matches with the word to be replaced (first word). As described above, the output-content control device 1 replaces a word with the word to be replaced when the type information thereof matches with that of the word to be replaced. Therefore, when there is a word of a different type, that is, a word the meaning of which is different but reading of which is the same, the first output-content-generating unit 60 avoids the word being replaced with the other word, thereby suppressing the first output sentence after the replacement becoming difficult also for the user H.

[0066] Furthermore, the output-content generating unit 40 replaces a word included in the notification information with a word of a broader term of the word. Since the people other than the user H cannot infer the word included in the content information before the replacement when the people hear the word of the broader term, it is possible to suppress the information being known by the people other than the user H. On the other hand, since the user H can be aware of the word included in the content information in the first place, the user H can infer the word included in

the notification information before the replacement when hearing the word of the broader term, and can understand the content appropriately.

[0067] Moreover, the output-content generating unit 40 replaces, when a word included in the notification information is a proper noun, the word with an initial of the proper noun. The people other than the user H cannot infer the word included in the notification information before the replacement when the people hear the initial, and it is possible to suppress the information being known by the people other than the user H. On the other hand, since the user H can be aware of the word included in the content information in the first place, the user H can infer the word included in the notification information before the replacement when hearing the initial, and can understand the content appropriately.

[0068] The voice classifying unit 42 classifies the voice V1 into the first voice V1A when the voice V1 spoken by the user is a whisper. The output-content control device 1 detects a whisper and, in that case, generates the first output sentence. It is thereby appropriately determined whether the content is preferable not to be known by the people other than the user H, and is possible to suppress the influence thereof appropriately.

[0069] FIG. 8 is a schematic diagram showing another example of the output-content control device according to the first embodiment. In the output-content control device 1 according to the first embodiment, the output controller 44 converts the output sentence into the voice data , and causes the voice output unit 12 to output the voice data as the voice V2 as described above. However, when outputting the first output sentence, the output-content control device 1 can output the first output sentence as text data

to an output unit other than the voice output unit 12 as shown in FIG. 8. For example, the output-content control device 1 can cause a display device 12A that is connected to the output-content control device 1 to display the first output sentence. Moreover, the output-content control device 1 can cause a terminal device 102 owned by the user H to display the first output sentence. Furthermore, the output-content control device 1 can attach the first output sentence to an e-mail and send the email to a predetermined destination. In this case, it is preferable that the output-content control device 1 determine a transmission destination in advance. As described above, when outputting the first output sentence, the output-content control device 1 can output the first output sentence as text data, not in a voice. In this case, since a voice is not output, it is possible to avoid it being heard by other people, and to further reduce the possibility that the content is known by other people. Furthermore, even if the text data is seen by people, since the word is replaced as the first output sentence, it is difficult for other people to understand the sentence.

Second Embodiment

[0070] Next, a second embodiment is explained. While the output-content control device 1 according to the first embodiment includes the voice detecting unit 10 and the voice output unit 12, an output-content control device 1A according to the second embodiment does not include the voice detecting unit 10 and the voice output unit 12. In the second embodiment, explanation of parts having the common configurations with the first embodiment is omitted.

[0071] FIG. 9 is a schematic block diagram of an information output system according to the second embodiment. As shown in FIG. 9, an information output

system 100 according to the second embodiment includes the output-content control device 1A and a response device 2A. The response device 2A is, for example, a smart speaker, and includes the voice detecting unit 10, the voice output unit 12, the lighting unit 14, and a communication unit 15A. The output-content control device 1A is a device (server) positioned distant from the response device 2A, and includes the controller 16, a communication unit 18A, and the storage 20. The output-content control device 1A and the response device 2A are connected by wireless communication, but can be connected by wired communication.

[0072] The output-content control device 1A acquires the voice V1 that has been detected by the voice detecting unit 10 through information communication via the communication unit 15A and the communication unit 18A. The output-content control device 1A then generates the output sentence by performing similar processing as the first embodiment, and output the output sentence to the response device 2A. The response device 2A converts the output sentence into the voice data by the voice output unit 12 to output as the voice V2. Note that the output-content control device 1A can generate the output sentence and transmit to the response device 2A. In this case, the voice output unit 12 outputs the acquired voice data as the voice V2. As described, the information output system 100 includes the output-content control device 1A, the voice detecting unit 10 that detects the voice V1 spoken by the user H, and the voice output unit 12 that outputs the output sentence generated by the output-content generating unit 40 as the voice V2. As described above, the output-content control device 1A produces effects similar to those of the first embodiment even when the response device 2A is a separate unit. That is, it can be said that the output-

content control device 1 according to the first embodiment is integrated with the response device 2A and, in other words, can also be regarded as an information output system.

[0073] As described above, the information output system includes the output-content control device, and an output unit that outputs the output sentence generated by the output-content generating unit 40. The output unit is a voice output unit 12 that outputs the output sentence as a voice, but can also be the display device 12A or the like as described above, and the method of outputting the output sentence can be in voice or in text data.

[0074] According to the present application, when a content of inquiry of a user is notified, a notification content can be made difficult to be understood by people other than the user.

[0075] Although the application has been described with respect to specific embodiments for a complete and clear disclosure, the appended claims are not to be thus limited but are to be construed as embodying all modifications and alternative constructions that may occur to one skilled in the art that fairly fall within the basic teaching herein set forth.

What is claimed is:

1. An output-content control device comprising:

a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice;

an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user;

a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information; and

an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information, wherein

the output-content generating unit is further configured to generate the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

2. The output-content control device according to claim 1, wherein

the notification-information acquiring unit is further configured to acquire, as the notification information, content information to be notified to the user and type information indicating a type of the content information, and

the output-content generating unit is further configured to select the at least one word to be replaced with the other word based on a word included in the content information and the type information that is associated with the content information.

3. The output-content control device according to claim 2, wherein

the output-content generating unit is further configured to read relationship information including information of a first word that is a predetermined word and a second word that is associated with the first word, and to replace a word included in the notification information with the second word when the word included in the notification information matches with the first word.

4. The output-content control device according to claim 3, wherein

the relationship information further includes information of type information indicating a type of the first word, and

the output-content generating unit is further configured to select a word included in the notification information as a word to be replaced with another word when the type information of the word included in the notification information matches with the type information of the first word and the word included in the notification information matches with the first word.

5. The output-content control device according to claim 1, wherein

the voice classifying unit is further configured to determine the voice to be the predetermined voice when the voice spoken by the user is a whisper.

6. An output-content control method comprising:

analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information to be notified to the user based on the intention information; and

generating an output sentence as sentence data to be output to the user based on the notification information, wherein

the generating further includes generating the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

7. A non-transitory storage medium that stores an output-content control program that causes a computer to execute:

analyzing an acquired voice spoken by a user to determine whether the voice is a predetermined voice;

analyzing the acquired voice to detect intention information indicating what kind of information is wished to be acquired by the user;

acquiring notification information to be notified to the user based on the intention information; and

generating an output sentence as sentence data to be output to the user based on the notification information, wherein

the generating further includes generating the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the

predetermined voice.

ABSTRACT

An output-content control device includes a voice classifying unit configured to analyze a voice spoken by a user and acquired by a voice acquiring unit to determine whether the voice is a predetermined voice; an intention analyzing unit configured to analyze the voice acquired by the voice acquiring unit to detect intention information indicating what kind of information is wished to be acquired by the user; a notification-information acquiring unit configured to acquire notification information to be notified to the user based on the intention information; and an output-content generating unit configured to generate an output sentence as sentence data to be output to the user based on the notification information and also configured to generate the output sentence in which at least one word selected among words included in the notification information is replaced with another word when the voice is determined to be the predetermined voice.

FIG.1

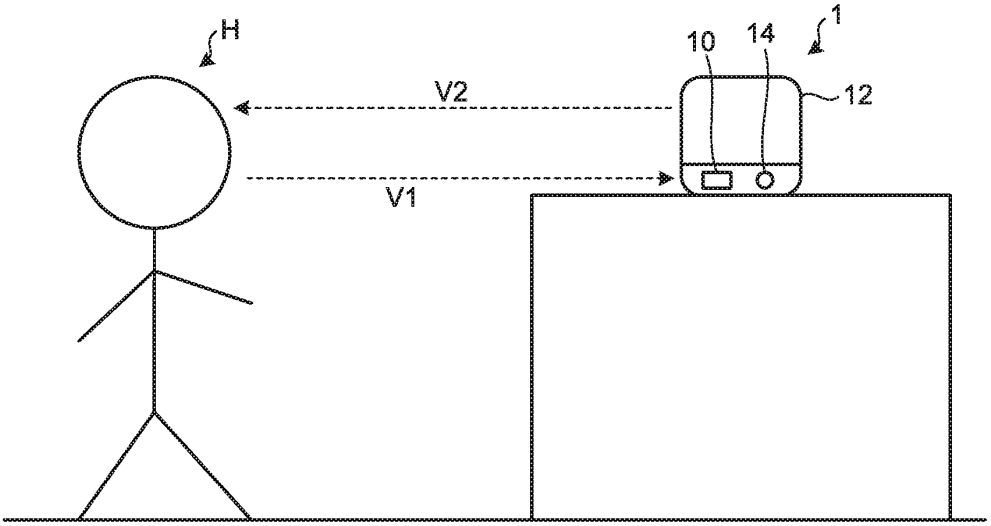


FIG.2

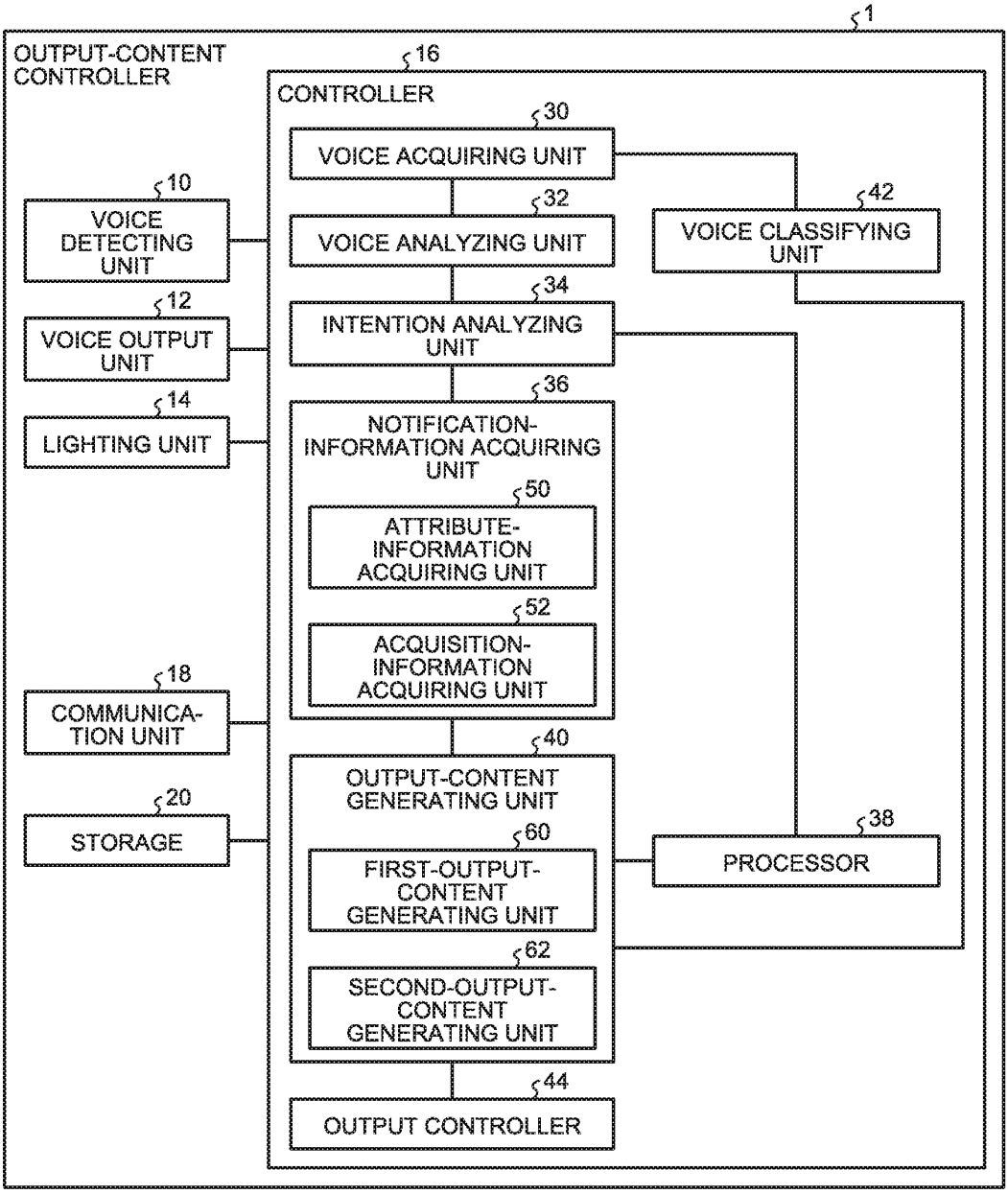

1
OUTPUT-CONTENT CONTROLLER
16
CONTROLLER
30
VOICE ACQUIRING UNIT
10
VOICE DETECTING UNIT
32
VOICE ANALYZING UNIT
42
VOICE CLASSIFYING UNIT
12
VOICE OUTPUT UNIT
34
INTENTION ANALYZING UNIT
14
LIGHTING UNIT
36
NOTIFICATION-INFORMATION ACQUIRING UNIT
50
ATTRIBUTE-INFORMATION ACQUIRING UNIT
52
ACQUISITION-INFORMATION ACQUIRING UNIT
18
COMMUNICA-TION UNIT
40
OUTPUT-CONTENT GENERATING UNIT
20
STORAGE
60
FIRST-OUTPUT-CONTENT GENERATING UNIT
38
PROCESSOR
62
SECOND-OUTPUT-CONTENT GENERATING UNIT
44
OUTPUT CONTROLLER

FIG.3

INTENTION INFORMATION I	SCHEDULE

FIG.4

ATTRIBUTE TYPE INFORMATION E0	PERSON	DATE
ATTRIBUTE CONTENT INFORMATION E1	MR. YAMADA	MARCH 20, 2020

FIG.5

ACQUISITION TYPE INFORMATION A0	LOCATION	TIME	WHAT TO DO	PERSON
ACQUISITION CONTENT INFORMATION A1	TOKYO BUILDING	FROM 15 O'CLOCK	MEETING	MR. YOSHIDA

FIG.6

WORD TO BE REPLACED	MEETING	DINNER
REPLACING WORD	HOSPITAL VISIT	MEETING

FIG.7

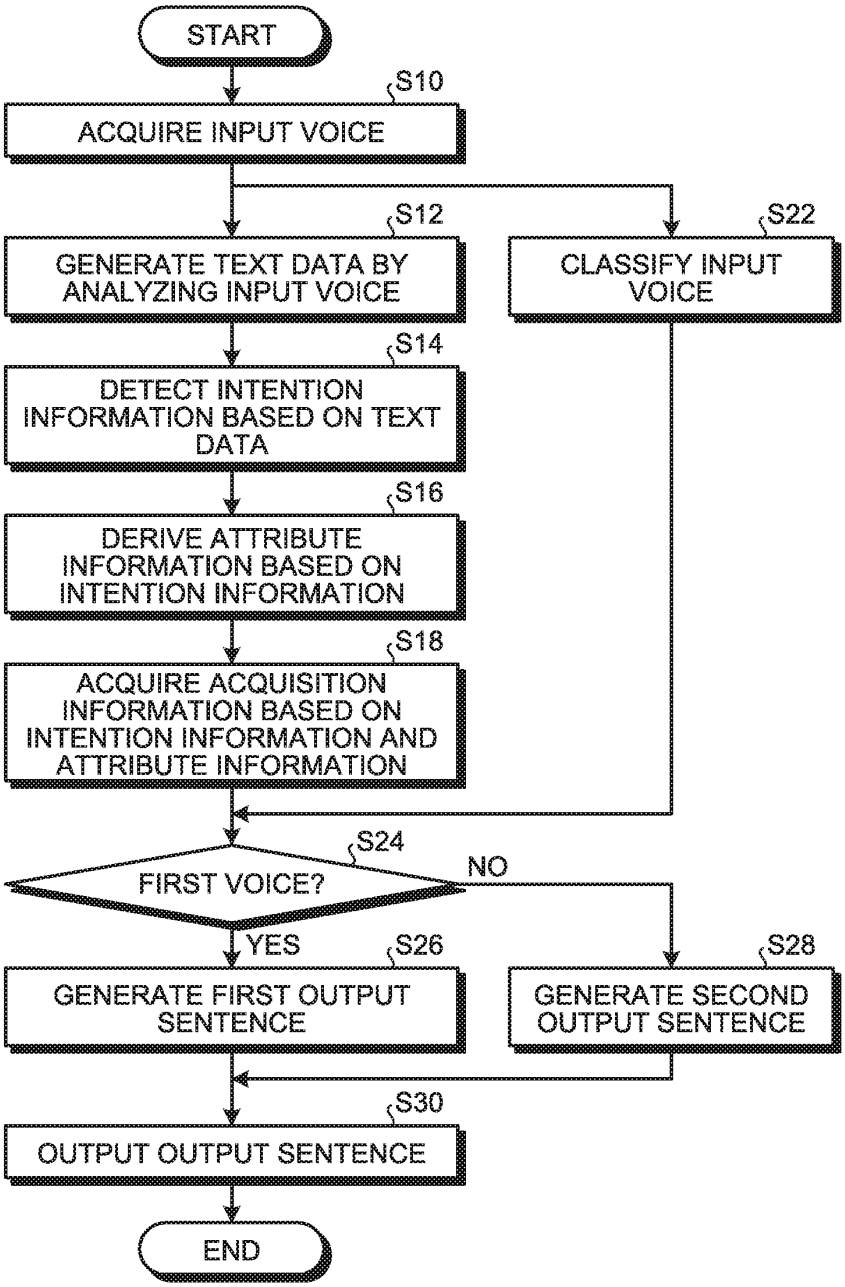
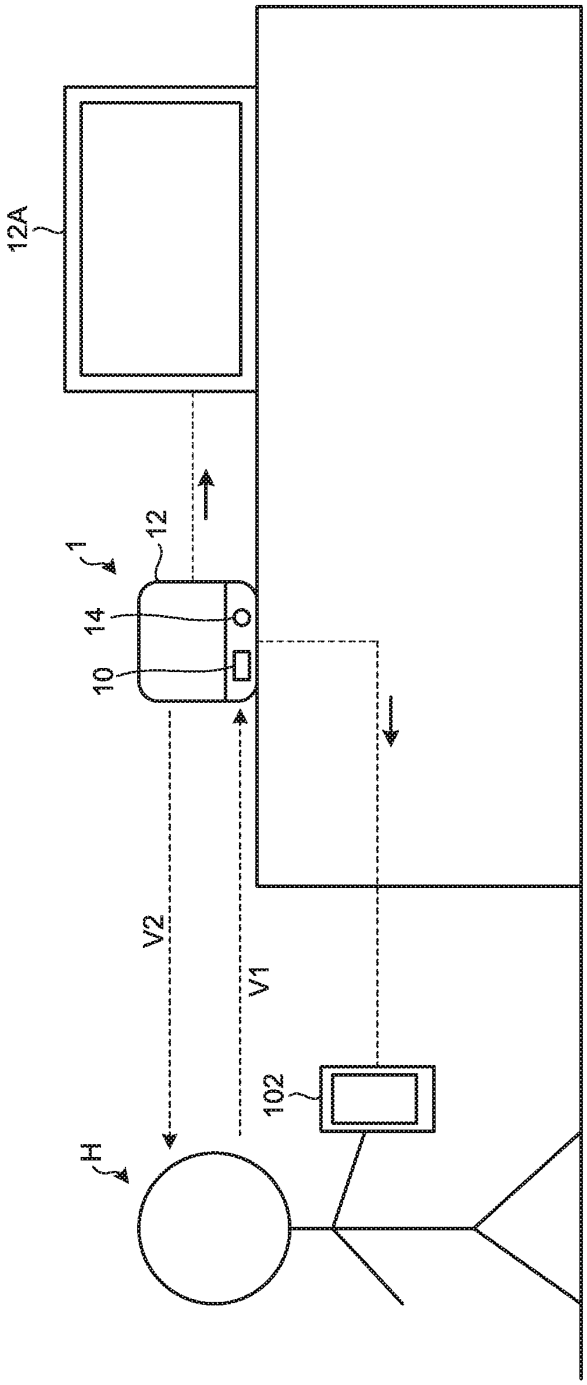
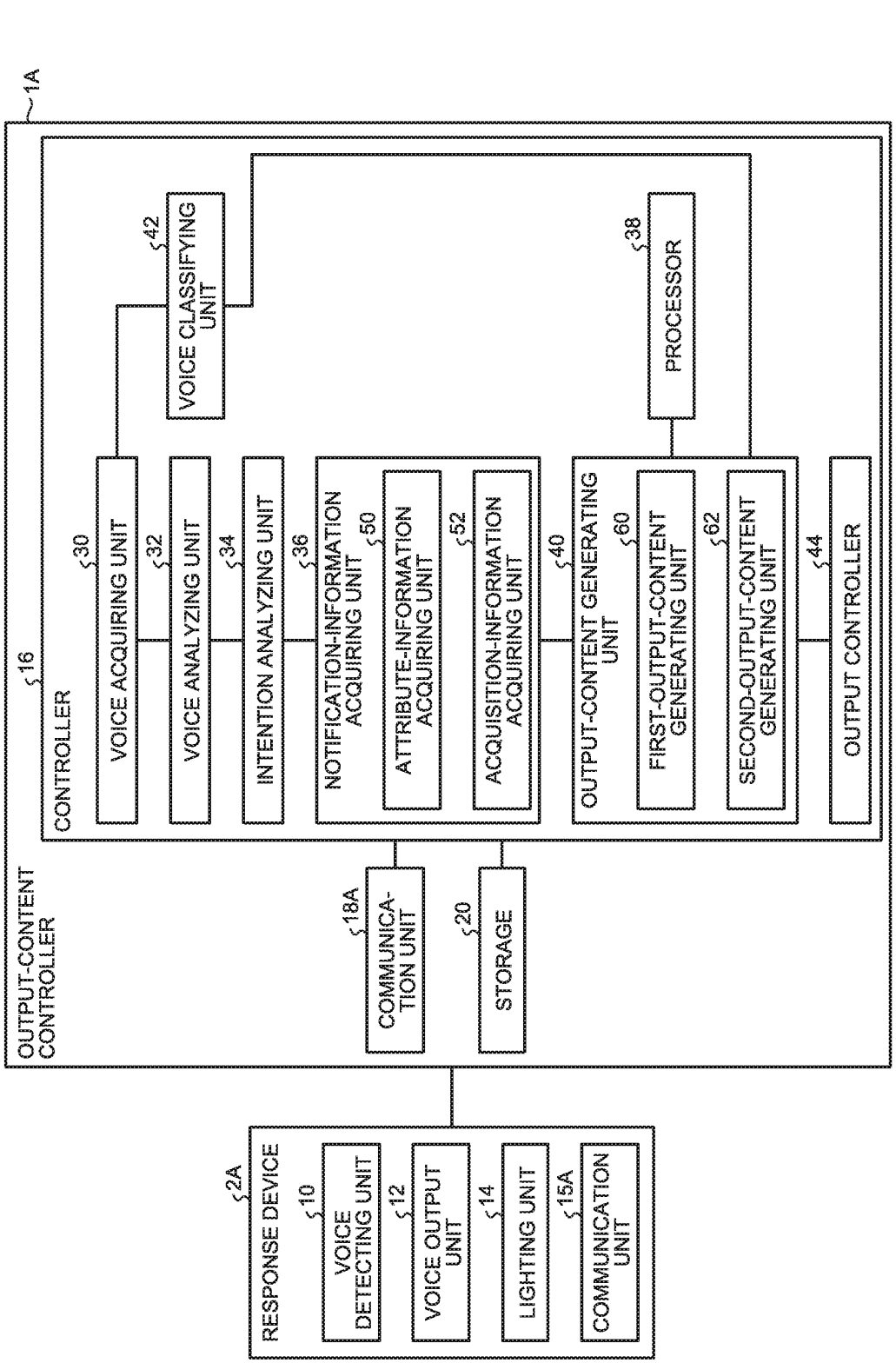

START
S10
ACQUIRE INPUT VOICE
S12
GENERATE TEXT DATA BY ANALYZING INPUT VOICE
S22
CLASSIFY INPUT VOICE
S14
DETECT INTENTION INFORMATION BASED ON TEXT DATA
S16
DERIVE ATTRIBUTE INFORMATION BASED ON INTENTION INFORMATION
S18
ACQUIRE ACQUISITION INFORMATION BASED ON INTENTION INFORMATION AND ATTRIBUTE INFORMATION
S24
FIRST VOICE?
NO
YES
S26
GENERATE FIRST OUTPUT SENTENCE
S28
GENERATE SECOND OUTPUT SENTENCE
S30
OUTPUT OUTPUT SENTENCE
END

FIG.8



6/6

FIG.9


100
1A
OUTPUT-CONTENT CONTROLLER
16
CONTROLLER
30
VOICE ACQUIRING UNIT
32
VOICE ANALYZING UNIT
34
INTENTION ANALYZING UNIT
36
NOTIFICATION-INFORMATION ACQUIRING UNIT
50
ATTRIBUTE-INFORMATION ACQUIRING UNIT
52
ACQUISITION-INFORMATION ACQUIRING UNIT
40
OUTPUT-CONTENT GENERATING UNIT
60
FIRST-OUTPUT-CONTENT GENERATING UNIT
62
SECOND-OUTPUT-CONTENT GENERATING UNIT
44
OUTPUT CONTROLLER
42
VOICE CLASSIFYING UNIT
38
PROCESSOR
18A
COMMUNICA-TION UNIT
20
STORAGE
2A
RESPONSE DEVICE
10
VOICE DETECTING UNIT
12
VOICE OUTPUT UNIT
14
LIGHTING UNIT
15A
COMMUNICATION UNIT

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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
	Tatsumi		Naganuma	

Residence Information (Select One) US Residency ● Non US Residency Active US Military Service

City	Yokohama-shi, Kanagawa	Country of Residence i	JP

Mailing Address of Inventor:

Address 1	c/o Intellectual Property Dept., JVC KENWOOD Corp.		
Address 2	3-12, Moriyacho, Kanagawa-ku		
City	Yokohama-shi, Kanagawa	**State/Province**	
Postal Code	221-0022	**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	23623		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM		
Attorney Docket Number	SAJVP172US	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	6	**Suggested Figure for Publication (if any)**	1

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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	23623		

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

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

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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)
2018-044598	JP	2018-03-12	647C

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

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

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

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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.

PTO/AIA/14 (11-15)
Approved for use through 04/30/2017. 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	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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	JVC KENWOOD Corporation		
Mailing Address Information For Applicant:			
Address 1	3-12, Moriyacho, Kanagawa-ku		
Address 2			
City	Yokohama-shi, Kanagawa	**State/Province**	
Country	JP	Postal Code	221-0022
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.

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

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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	/Greg Turocy/			Date (YYYY-MM-DD)	2019-03-07
First Name	Gregory	Last Name	Turocy	Registration Number	36952

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

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	SAJVP172US
	Application Number	
Title of Invention	OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM	

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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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.

Docket No. Amin, Turocy & Watson, LLP

COMBINED DECLARATION AND ASSIGNMENT FOR U.S. PATENT APPLICATION USING AN APPLICATION DATA SHEET

DECLARATION

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Title: OUTPUT-CONTENT CONTROL DEVICE, OUTPUT-CONTENT CONTROL METHOD, AND NON-TRANSITORY STORAGE MEDIUM

the application of which is attached hereto unless the following is checked

_____ was filed on _____ as United States application Serial No. _____, or as described and claimed in PCT International Application No. _____filed on _____ and amended on _____ (if any).

The above-identified application was made or authorized to be made by me.

Please direct all communications to the following address:

the address associated with Customer Number **23623**, and direct telephone calls to

Gregory Turocy of Amin, Turocy & Watson, LLP at 216-696-8730.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. Section 1001 by fine or imprisonment of not more than five (5) years, or both.

ASSIGNMENT

For good and valuable consideration received of the hereinafter named assignee, receipt of which is hereby acknowledged, the undersigned

Name: Tatsumi NAGANUMA **Residence:** Yokohama-shi, Kanagawa, JAPAN

hereby sell and assign to JVC KENWOOD Corporation, a corporation of Japan, having a business address at 3-12, Moriyacho, Kanagawa-ku, Yokohama-shi, Kanagawa 221-0022 Japan, its successors and assigns, the entire right, title and interest, so far as concerns the United States and the Territories and Possessions thereof and all foreign countries, in and to the inventions titled above for which application for United States Letters Patent is executed by the undersigned on the date below and is being filed concurrently herewith, said application for United States Letters Patent, any and all other applications for Letters Patent on said inventions in countries foreign to the United States, including all divisional, renewal, substitute, continuation, Convention applications, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof for the full term or terms for which the same may be granted based in whole or in part upon said inventions or upon said applications, and any and all Letters Patent and

reissues and extensions of Letters Patent granted for said inventions or upon said applications, and every priority right that is or may be predicated upon or arise from said inventions, said applications and said Letters Patent; said assignee being hereby authorized to file patent applications in any or all countries on any or all said inventions in the name of the undersigned or in the name of said assignee or otherwise as said assignee may deem advisable, under the International Convention or otherwise; the Commissioner of Patents and Trademarks of the United States of America and the empowered officials of all other governments being hereby authorized to issue or transfer all said Letters Patent to said assignee in accordance herewith; this assignment being under covenant, not only that full power to make the same is had by the undersigned, but also that such assigned right is not encumbered by any grant, license, or other right heretofore given, and that the undersigned will do all acts reasonably serving to assure that said inventions, patent applications and Letters Patent shall be held and enjoyed by said assignee as fully and entirely as the same could have been held and enjoyed by the undersigned if this assignment had not been made, and particularly to execute and deliver to said assignee all lawful documents including petitions, specifications, oaths, assignments, invention disclaimers, and lawful affidavits in form and substance which may be requested by said assignee, to furnish said assignee with all facts relating to said inventions or the history thereof and any and all documents, photographs, models, samples or other physical exhibits which may be useful for establishing the facts of conception, disclosure and reduction to practice of said inventions, and to testify in any proceedings relating to said inventions, patent applications and Letters Patent.

The undersigned hereby appoint, request, and grant power to the following law firm to insert on this Assignment further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document, for example, the U.S. Serial No. and filing date.

Amin, Turocy & Watson, LLP, 57th Floor - Key Tower, 127 Public Square, Cleveland, Ohio 44114.

Legal name of inventor: Tatsumi NAGANUMA

Inventor's signature: Tatsumi Naganuma Date: Jan. 25, 2019