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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/142,399	12/27/2013	Matthew Sharifi	16113-5312001	3817
26192 7590 02/20/2014 FISH & RICHARDSON P.C. PO BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER GUERRA-ERAZO, EDGAR X	
			ART UNIT 2659	PAPER NUMBER
			NOTIFICATION DATE 02/20/2014	DELIVERY MODE ELECTRONIC

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

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

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

PATDOCTC@fr.com

Office Action Summary	Application No. 14/142,399	Applicant(s) SHARIFI, MATTHEW	
	Examiner Edgar Guerra-Erazo	Art Unit 2659	AIA (First Inventor to File) 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 12/27/2013.
☐ 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) 1-20 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) 1-20 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

Introduction

1. This office action is in response to Applicant's submission filed on 12/27/2013. Claims 1-20 are pending in the application and have been examined.
2. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
3. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

Claim Rejections - 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(d):

(d) REFERENCE IN DEPENDENT FORMS.—Subject to subsection (e), a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), fourth paragraph:

Subject to the [fifth paragraph of 35 U.S.C. 112 (pre-AIA)], a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

5. Claims 18-20 are rejected under 35 U.S.C. 112(d) or pre-AIA 35 U.S.C. 112, 4th paragraph, as being of improper dependent form for failing to further limit the subject matter of

the claim upon which it depends, or for failing to include all the limitations of the claim upon which it depends. Claim 18 appears to depend on itself. Claims 19, 20 appear to further depend on Claim 18. Applicant may cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, rewrite the claim(s) in independent form, or present a sufficient showing that the dependent claim(s) complies with the statutory requirements. For the purpose of examination, it is respectfully noted that it would be assumed by the Examiner that Claim 18 could depend from independent Claim 17.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim(s) 1 and associated dependent **Claims 2-4, 6, 7** is/are rejected under 35 U.S.C. 101 as not falling within one of the four statutory categories of invention. While the claim(s) recite a series of steps or acts to be performed, a statutory “process” under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a manufacture or a machine), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. The instant claim(s) neither transform underlying subject matter (i.e., the claimed process only involves generating a voice profile in coordination with audio information from utterances of users and not any physical transformation) nor positively recite structure associated with another statutory category (i.e., the claimed process does not only involve any type of physical hardware

and could be performed by a human. For example, in a group of human users discussing a topic verbally, user A could verbally describe how often in terms of time user B interrupts the verbal conversation with different tones of voice in agreement or disagreement, and as such a voice profile could be defined and/or described in the manner in which the conversation is interrupted to agree or disagree).

Furthermore, based upon consideration of all of the relevant factors with respect the claim as a whole, Claim(s) 1 and associated dependent claims 2-4, 6, 7 is(are) held to claim an abstract idea, and is therefore rejected as ineligible subject matter under 35 U.S.C. 101. The rationale for this finding is explained as follows. The process of generating a voice profile in coordination with audio information from utterances of users considering beginning and ending points in the users' utterances is a mental process, and therefore do not define a statutory process since it is a mental activity as it can be performed to forming a judgment, observation, evaluation, or opinion. In the present case, forming an observation is attained.

Claim Rejections - 35 USC § 103

7. 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 of this title, 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.

8. Claims 1-20 are rejected under 35 U.S.C. 103 as being unpatentable over Yu et al., (U.S. Patent Application Publication: 2010/0017209) in view of Keough et al., (U.S. Patent Application Publication: 2005/0108011), hereinafter referred to as YU and KEOUGH.

With respect to **Claims 1, 9 and 17**, YU discloses:

A computer-implemented method (YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], **Figs. 4B, 5B**), [one or more computers and one or more storage devices storing instructions that are operable, when executed by the one or more computers, to cause the one or more computers, and a non-transitory computer-readable medium storing software comprising instructions executable by one or more computers which, upon such execution, cause the one or more computers to perform operations]comprising:

receiving audio data corresponding to an utterance spoken by a particular user (**implied in voice detector ability to receive and/or detect users' spoken utterances**, YU ¶¶ [0043], **Fig.3A-B, Fig. 7**);

generating a voice profile for the particular user using at least a portion of the audio data (**implied in training and testing of voice models with sample voice distributions and voice prints that may correspond to any given user voice verification**, YU ¶¶ [0071], [0075], [0078]);

determining in the audio data a beginning point or an ending point of the utterance based at least in part on the voice profile for the particular user (**implied in position searching in the voice signal identifying starting and terminal points as “endpoint detection” considering voice models with sample voice distributions and voice prints that may correspond to any given user voice verification**, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], **Figs. 4B, 5B**) ;

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and

based on the beginning point, the ending point, or both the beginning point and the ending point, outputting data indicating the utterance **(implied in outputting voice verification based on “endpoint detection” considering voice models with sample voice distributions and voice prints that may correspond to any given user voice verification, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 4B, 5B).**

YU does not explicitly, but KEOUGH discloses the bracketed limitations comprising [one or more computers and one or more storage devices storing instructions that are operable, when executed by the one or more computers, to cause the one or more computers, and a non-transitory computer-readable medium storing software comprising instructions executable by one or more computers which, upon such execution, cause the one or more computers to perform operations] **(implied in processor and memory means with executable instructions, and hardware systems KEOUGH [0022], Fig. 8).**

YU and KEOUGH are analogous art because they are from a similar field of endeavor in speech and/or voice processing applications. Thus, it would have been obvious to a person of ordinary skill in the art, before the time of invention, to modify the teachings of YU with the processor and memory means and hardware systems taught by KEOUGH in order to advantageously facilitate the ability to provide a hardware implementation for interaction with users of other computers or other machines and systems, (KEOUGH [0026], [0027], Fig. 8).

With respect to **Claims 2, 10, 18**, YU in view of KEOUGH discloses:
wherein generating a voice profile for the particular user using at least a portion of the audio data comprises:
determining acoustic features of the at least the portion of the audio data (**implied in voice features retrieving of input voice data**, YU ¶¶ [0048], [0049], [0052], [0053],[0057], Figs. 3A-B);
based on the acoustic features, determining that the audio data is speech audio data (**implied in verifying voice features as speech from the retrieving of voice features**, ¶¶ [0048], [0049], [0052], [0053], [0057]) ; and
generating the voice profile for the particular user based on the acoustic features (**implied in voice verification based on “endpoint detection” considering voice models with sample voice distributions and voice prints that may correspond to any given user voice verification in agreement with the training and testing of voice models with sample voice distributions and voice prints that may correspond to any given user voice verification**, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 4B, 5B).

With respect to **Claims 3, 11**, YU in view of KEOUGH discloses:
wherein determining in the audio data a beginning point or an ending point of the utterance based at least in part on the voice profile for the particular user comprises:
determining acoustic features of a subsequent portion of the audio data (**implied in voice features retrieving of input voice data having subsequent endpoints according to Fig. 4B**, YU ¶¶ [0048], [0049], [0052], [0053],[0057], Figs. 3A-B, Fig. 4B);

determining a subsequent voice profile based on the acoustic features of the subsequent portion of the audio data **(implied in voice verification based on a plurality of “endpoint detection” points considering voice models with sample voice distributions and voice prints of a first, second, and/or third sample voices sequentially present that may correspond to any given user voice verification in agreement with the training and testing of voice models with sample voice distributions and voice prints, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 4B, 5B, Figs. 8, 9);**

comparing the subsequent voice profile with the voice profile for the particular user **(implied in voice verification comparing based on a plurality of “endpoint detection” points considering voice models with sample voice distributions and voice prints of a first, second, and/or third sample voices that may correspond to any given user voice verification in agreement with the training and testing of voice models with sample voice distributions and voice prints considering a predetermined greater and/or smaller similarity comparing threshold, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 2, 4B, 5B, Figs. 8, 9);** and based further on comparing the subsequent voice profile with the voice profile for the particular user, determining in the audio data the beginning point or the ending point of the utterance **(implied in voice verification comparing and determining based on a plurality of “endpoint detection” points considering voice models with sample voice distributions and voice prints of a first, second, and/or third sample voices that may correspond to any given user voice verification in agreement with the training and testing of voice models with sample voice distributions and voice prints considering a predetermined greater and/or smaller**

similarity comparing threshold, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 2, 4B, 5B, Figs. 8, 9).

With respect to **Claims 4, 12**, YU in view of KEOUGH discloses:
wherein comparing the subsequent voice profile with the voice profile for the particular user
(implied in voice verification comparing and determining based on a plurality of “endpoint detection” points considering voice models with sample voice distributions and voice prints of a first, second, and/or third sample voices that may correspond to any given user voice verification in agreement with the training and testing of voice models with sample voice distributions and voice prints considering a predetermined greater and/or smaller similarity comparing threshold, YU ¶¶[0043]-[0045], [0053], [0071], [0075], [0078], Figs. 2, 4B, 5B, Figs. 8, 9) comprises [comparing using second language similarities].

YU does not explicitly, but KEOUGH discloses the bracketed limitations comprising
[comparing using second language similarities] **(implied in comparing voice capture templating and profiling considering other language and voice similarities, KEOUGH [0019], [0025], [0026], [0060], Figs. 3 and 4).**

YU and KEOUGH are analogous art because they are from a similar field of endeavor in speech and/or voice processing applications. Thus, it would have been obvious to a person of ordinary skill in the art, before the time of invention, to modify the teachings of YU with the comparing voice capture templating and profiling considering other language and voice similarities techniques taught by KEOUGH in order to advantageously provide various other

techniques for uniquely identify a portion (whether fractional or in its entirety) of a voice,
(KEOUGH [0060], Figs. 3 and 4).

With respect to **Claims 5, 13**, YU in view of KEOUGH discloses:
wherein the acoustic features comprise mel-frequency cepstral coefficients, filterbank energies,
or fast Fourier transform frames (**implied in how voice features may include linear prediction
cepstrum coefficients (LPCC) and Mel frequency cepstrum coefficients (MFCC)**), YU ¶¶
[0057]).

With respect to **Claims 6, 14**, YU in view of KEOUGH discloses:
wherein a duration of the initial portion of the received audio data is a particular amount of time
(**implied in initial and end portions with durations of received audio data with particular
amount of time with frames**, YU ¶¶ [0043]-[0045], [0053], [0071], [0075], [0078], Figs. 7,
and 4A-B).

With respect to **Claims 7, 15, 19**, YU in view of KEOUGH discloses:
wherein outputting data indicating the utterance comprises:
outputting a time stamp indicating the beginning point or the endpoint point of the utterance
(**implied in voice verification comparing and determining based on a plurality of “endpoint
detection” points considering time stamps as initial and end points**, YU ¶¶[0043]-[0045],
[0053], [0071], [0075], [0078], Figs. 2, 4B, 5B, Figs. 8, 9).

With respect to **Claims 8, 16, 20**, YU in view of KEOUGH discloses:

wherein outputting data indicating the utterance comprises outputting the data indicating the utterance to an automatic speech recognizer or a query parser (**implied in the automatic speech recognizer in voice verification and recognition system, YU ¶¶ [0046], [0048]**).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please, see PTO-892.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgar Guerra-Erazo whose telephone number is (571) 270-3708. The examiner can normally be reached on M-F 7:30a.m.-5:00p.m. EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pierre-Louis Desir can be reached on (571) 272-7799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private

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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.

/Edgar Guerra-Erazo/
Primary Examiner, Art Unit 2659

Notice of References Cited	Application/Control No. 14/142,399	Applicant(s)/Patent Under Reexamination SHARIFI, MATTHEW	
	Examiner Edgar Guerra-Erazo	Art Unit 2659	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2001/0034601 A1	10-2001	Chujo et al.	704/233
*	B	US-2005/0108011 A1	05-2005	Keough et al.	704/243
*	C	US-7,035,807 B1	04-2006	Brittain et al.	704/278
*	D	US-2009/0149166 A1	06-2009	Habib et al.	455/414.3
*	E	US-2010/0017209 A1	01-2010	Yu et al.	704/246
*	F	US-2010/0131279 A1	05-2010	Pilz, Christian	704/273
*	G	US-2010/0280827 A1	11-2010	Mukerjee et al.	704/236
*	H	US-2011/0153309 A1	06-2011	KIM et al.	704/2
*	I	US-2011/0264447 A1	10-2011	Visser et al.	704/208
	J	US-			
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
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