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|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|--------------------------------------------------------|
| <b>UTILITY<br/>PATENT APPLICATION<br/>TRANSMITTAL</b><br><br><i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i> | Attorney Docket No.              | 1234.001US1                                            |
|                                                                                                                                     | First Named Inventor             | Andrei Golman                                          |
|                                                                                                                                     | Title                            | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |
|                                                                                                                                     | Priority Mail Express® Label No. |                                                        |

|                                                                                                            |                                                                                             |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>APPLICATION ELEMENTS</b><br><i>See MPEP chapter 600 concerning utility patent application contents.</i> | <b>Commissioner for Patents</b><br><b>P.O. Box 1450</b><br><b>Alexandria, VA 22313-1450</b> |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|

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| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> <b>Fee Transmittal Form</b><br/>(PTO/SB/17 or equivalent)</li> <li>2. <input checked="" type="checkbox"/> <b>Applicant asserts small entity status.</b><br/>See 37 CFR 1.27</li> <li>3. <input type="checkbox"/> <b>Applicant certifies micro entity status.</b> See 37 CFR 1.29.<br/>Applicant must attach form PTO/SB/15A or B or equivalent.</li> <li>4. <input checked="" type="checkbox"/> <b>Specification</b> [Total Pages <u>28</u>]<br/>Both the claims and abstract must start on a new page.<br/>(See MPEP § 608.01(a) for information on the preferred arrangement)</li> <li>5. <input checked="" type="checkbox"/> <b>Drawing(s)</b> (35 U.S.C. 113) [Total Sheets <u>12</u>]</li> <li>6. <b>Inventor's Oath or Declaration</b> [Total Pages <u>2</u>]<br/>(including substitute statements under 37 CFR 1.64 and assignments<br/>serving as an oath or declaration under 37 CFR 1.63(e))             <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> Newly executed (original or copy)</li> <li>b. <input type="checkbox"/> A copy from a prior application (37 CFR 1.63(d))</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> <b>Application Data Sheet</b> * See note below.<br/>See 37 CFR 1.76 (PTO/AIA/14 or equivalent)</li> <li>8. <b>CD-ROM or CD-R</b><br/>in duplicate, large table, or Computer Program (Appendix)<br/><input type="checkbox"/> Landscape Table on CD</li> <li>9. <b>Nucleotide and/or Amino Acid Sequence Submission</b><br/>(if applicable, items a. – c. are required)             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> Computer Readable Form (CRF)</li> <li>b. <input type="checkbox"/> Specification Sequence Listing on:                 <ol style="list-style-type: none"> <li>i. <input type="checkbox"/> CD-ROM or CD-R (2 copies); or</li> <li>ii. <input type="checkbox"/> Paper</li> </ol> </li> <li>c. <input type="checkbox"/> Statements verifying identity of above copies</li> </ol> </li> </ol> | <b>ACCOMPANYING APPLICATION PAPERS</b><br><br><ol style="list-style-type: none"> <li>10. <input type="checkbox"/> <b>Assignment Papers</b><br/>(cover sheet &amp; document(s))<br/>Name of Assignee _____</li> <li>11. <input type="checkbox"/> <b>37 CFR 3.73(c) Statement</b> <input type="checkbox"/> <b>Power of Attorney</b><br/>(when there is an assignee)</li> <li>12. <input type="checkbox"/> <b>English Translation Document</b><br/>(if applicable)</li> <li>13. <input type="checkbox"/> <b>Information Disclosure Statement</b><br/>(PTO/SB/08 or PTO-1449)<br/><input type="checkbox"/> Copies of citations attached</li> <li>14. <input type="checkbox"/> <b>Preliminary Amendment</b></li> <li>15. <input type="checkbox"/> <b>Return Receipt Postcard</b><br/>(MPEP § 503) (Should be specifically itemized)</li> <li>16. <input type="checkbox"/> <b>Certified Copy of Priority Document(s)</b><br/>(if foreign priority is claimed)</li> <li>17. <input type="checkbox"/> <b>Nonpublication Request</b><br/>Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent.</li> <li>18. <input checked="" type="checkbox"/> <b>Other:</b> REQUEST FOR PRIORITIZED EXAMINATION<br/>_____<br/>_____<br/>_____<br/>_____</li> </ol> |
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**\*Note:** (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 **must** be included in an Application Data Sheet (ADS).  
 (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

|                                                                                                                                                               |                   |           |  |                                   |            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------|--|-----------------------------------|------------|
| <b>19. CORRESPONDENCE ADDRESS</b>                                                                                                                             |                   |           |  |                                   |            |
| <input checked="" type="checkbox"/> The address associated with Customer Number: <u>85162</u> <b>OR</b> <input type="checkbox"/> Correspondence address below |                   |           |  |                                   |            |
| Name                                                                                                                                                          |                   |           |  |                                   |            |
| Address                                                                                                                                                       |                   |           |  |                                   |            |
| City                                                                                                                                                          |                   | State     |  | Zip Code                          |            |
| Country                                                                                                                                                       |                   | Telephone |  | Email                             |            |
| Signature                                                                                                                                                     | /Georgiy Khayet/  |           |  | Date                              | 2022-12-16 |
| Name (Print/Type)                                                                                                                                             | Georgiy L. Khayet |           |  | Registration No. (Attorney/Agent) | 59595      |

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

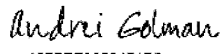
## Privacy Act Statement

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.

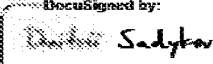
## DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                               |
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| <b>Title of<br/>Invention</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS</b> |
| <p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input checked="" type="checkbox"/> The attached application, or<br/> <input type="checkbox"/> United States application or PCT international application number _____<br/>         filed on _____.</p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p> <p style="text-align: center;"><b>WARNING:</b></p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p> |                                                               |
| <p><b>LEGAL NAME OF INVENTOR</b></p> <p>Inventor: <u>Andrei Golman</u> Date (Optional): <u>12/14/2022</u></p> <p>Signature: <u></u> DocuSigned by: _____</p> <p style="font-size: small;">167EFE0522434B6...</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |
| <p><b>Note:</b> An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| <b>Title of<br/>Invention</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS</b> |
| <p>As the below named inventor, I hereby declare that:</p> <p>This declaration is directed to: <input checked="" type="checkbox"/> The attached application, or <input type="checkbox"/> United States application or PCT international application number _____ filed on _____.</p> <p>The above-identified application was made or authorized to be made by me.</p> <p>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.</p> <p>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                               |
| <p><b>WARNING:</b></p> <p>Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.</p> |                                                               |
| <p><b>LEGAL NAME OF INVENTOR</b></p> <p>Inventor: <u>Dmitrii Sadykov</u> Date (Optional): <u>12/15/2022</u></p> <p>Signature: <u></u></p> <p><small>DocuSigned by: 30DE1130EE1348E.</small></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                               |
| <p>Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                               |

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. 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 1 minute 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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| Electronic Patent Application Fee Transmittal                                                    |          |                                                        |        |                      |
|--------------------------------------------------------------------------------------------------|----------|--------------------------------------------------------|--------|----------------------|
| Application Number:                                                                              |          |                                                        |        |                      |
| Filing Date:                                                                                     |          |                                                        |        |                      |
| Title of Invention:                                                                              |          | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |        |                      |
| First Named Inventor/Applicant Name:                                                             |          | Andrei Golman                                          |        |                      |
| Filer:                                                                                           |          | Georgiy L. Khayet/Irina Klimova                        |        |                      |
| Attorney Docket Number:                                                                          |          | 1234.001US1                                            |        |                      |
| Filed as Small Entity                                                                            |          |                                                        |        |                      |
| Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a) |          |                                                        |        |                      |
| Description                                                                                      | Fee Code | Quantity                                               | Amount | Sub-Total in USD(\$) |
| Basic Filing:                                                                                    |          |                                                        |        |                      |
| UTILITY FILING FEE (ELECTRONIC FILING)                                                           | 4011     | 1                                                      | 80     | 80                   |
| UTILITY SEARCH FEE                                                                               | 2111     | 1                                                      | 350    | 350                  |
| UTILITY EXAMINATION FEE                                                                          | 2311     | 1                                                      | 400    | 400                  |
| REQUEST FOR PRIORITIZED EXAMINATION                                                              | 2817     | 1                                                      | 2100   | 2100                 |
| Pages:                                                                                           |          |                                                        |        |                      |
| Claims:                                                                                          |          |                                                        |        |                      |
| Miscellaneous-Filing:                                                                            |          |                                                        |        |                      |

| Description                              | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|------------------------------------------|----------|----------|--------|----------------------|
| PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL   | 1504     | 1        | 0      | 0                    |
| PROCESSING FEE, EXCEPT PROV. APPLS.      | 2830     | 1        | 70     | 70                   |
| <b>Petition:</b>                         |          |          |        |                      |
| <b>Patent-Appeals-and-Interference:</b>  |          |          |        |                      |
| <b>Post-Allowance-and-Post-Issuance:</b> |          |          |        |                      |
| <b>Extension-of-Time:</b>                |          |          |        |                      |
| <b>Miscellaneous:</b>                    |          |          |        |                      |
| <b>Total in USD (\$)</b>                 |          |          |        | <b>3000</b>          |

## Electronic Acknowledgement Receipt

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| <b>EFS ID:</b>                              | 47231995                                               |
| <b>Application Number:</b>                  | 18083727                                               |
| <b>International Application Number:</b>    |                                                        |
| <b>Confirmation Number:</b>                 | 6895                                                   |
| <b>Title of Invention:</b>                  | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |
| <b>First Named Inventor/Applicant Name:</b> | Andrei Golman                                          |
| <b>Customer Number:</b>                     | 85162                                                  |
| <b>Filer:</b>                               | Georgiy L. Khayet/Irina Klimova                        |
| <b>Filer Authorized By:</b>                 | Georgiy L. Khayet                                      |
| <b>Attorney Docket Number:</b>              | 1234.001US1                                            |
| <b>Receipt Date:</b>                        | 19-DEC-2022                                            |
| <b>Filing Date:</b>                         |                                                        |
| <b>Time Stamp:</b>                          | 12:07:13                                               |
| <b>Application Type:</b>                    | Utility under 35 USC 111(a)                            |

### Payment information:

|                                          |                  |
|------------------------------------------|------------------|
| Submitted with Payment                   | yes              |
| Payment Type                             | CARD             |
| Payment was successfully received in RAM | \$ 3000          |
| RAM confirmation Number                  | E2022BIC10001492 |
| Deposit Account                          |                  |
| Authorized User                          |                  |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

IPR2026-00275

|                 |                                             |                                               |                                          |                  |                  |
|-----------------|---------------------------------------------|-----------------------------------------------|------------------------------------------|------------------|------------------|
|                 |                                             |                                               |                                          |                  |                  |
| File Listing:   |                                             |                                               |                                          |                  |                  |
| Document Number | Document Description                        | File Name                                     | File Size(Bytes)/ Message Digest         | Multi Part /.zip | Pages (if appl.) |
| 1               | Application Data Sheet                      | 1-ADS_1234_001US1.pdf                         | 2277733                                  | no               | 8                |
|                 |                                             |                                               | 34fe19530e6fc459d9017bf3894b3f59743dcbb6 |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
| Information:    |                                             |                                               |                                          |                  |                  |
| 2               | Drawings-only black and white line drawings | 4-Figures-1234_001US1.pdf                     | 266845                                   | no               | 12               |
|                 |                                             |                                               | 6bdc710b19abfef8d09ce98dc012bb5e538db469 |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
| Information:    |                                             |                                               |                                          |                  |                  |
| 3               | Specification                               | 5-1234_001US1-Specification.pdf               | 254809                                   | no               | 28               |
|                 |                                             |                                               | 9ec9b89a05df41add73fc7b5f4f1a4d2ab3ae62b |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
| Information:    |                                             |                                               |                                          |                  |                  |
| 4               | Track One Request                           | 6-TrackI-1234_001US1.pdf                      | 129346                                   | no               | 2                |
|                 |                                             |                                               | 0ee491d834b2100625333a1ed8028db6a934791b |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
| Information:    |                                             |                                               |                                          |                  |                  |
| 5               | Transmittal of New Application              | 7-Transmittal_1234_001US1.pdf                 | 294004                                   | no               | 2                |
|                 |                                             |                                               | eaab5d0c502bf715a97b495ab74202845a3fcf92 |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
| Information:    |                                             |                                               |                                          |                  |                  |
| 6               | Oath or Declaration filed                   | 2-Declaration_1234_001US1_An drei_Golman_.pdf | 155344                                   | no               | 1                |
|                 |                                             |                                               | e7b1c50072107bcacc9e6dddffcf98b2a49e5795 |                  |                  |
| Warnings:       |                                             |                                               |                                          |                  |                  |
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| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Oath or Declaration filed | 3-<br>Declaration_1234_001US1_Dm<br>itrii_Sadykov_.pdf | 47893<br><br>c0c16e472a48e4b8737d90415d39580a5c6<br>c244b | no | 1 |
| <b>Warnings:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                                                        |                                                           |    |   |
| <b>Information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                                        |                                                           |    |   |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Fee Worksheet (SB06)      | fee-info.pdf                                           | 50629<br><br>0f224f6a0c677c7b308c23415d525726bf36<br>4af0 | no | 2 |
| <b>Warnings:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                                                        |                                                           |    |   |
| <b>Information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                                        |                                                           |    |   |
| <b>Total Files Size (in bytes):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                           |                                                        | 3476603                                                   |    |   |
| <p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b><br/> <b>If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</b></p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b><br/> <b>If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</b></p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b><br/> <b>If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</b></p> |                           |                                                        |                                                           |    |   |

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.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        |                        |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                        | Attorney Docket Number | 1234.001US1 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        | Application Number     |             |
| Title of Invention                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |
| <p>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.</p> <p>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.</p> |                                                        |                        |             |

**Secrecy Order 37 CFR 5.2:**

|                          |                                                                                                                                                                                                                                       |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | 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               |        |
|                                                                                                                                                                          | Andrei        |                | Golman      |                      |        |
| Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service |               |                |             |                      |        |
| City                                                                                                                                                                     | San Francisco | State/Province | CA          | Country of Residence | US     |

**Mailing Address of Inventor:**

|             |                           |                |    |  |  |
|-------------|---------------------------|----------------|----|--|--|
| Address 1   | 228 Park Ave S, Pmb 85451 |                |    |  |  |
| Address 2   |                           |                |    |  |  |
| City        | New York                  | State/Province | NY |  |  |
| Postal Code | 10003                     | Country        | US |  |  |

|                                                                                                                                                                          |            |                      |             |        |        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------|-------------|--------|--------|
| Inventor                                                                                                                                                                 | 2          |                      |             |        | Remove |
| Legal Name                                                                                                                                                               |            |                      |             |        |        |
| Prefix                                                                                                                                                                   | Given Name | Middle Name          | Family Name | Suffix |        |
|                                                                                                                                                                          | Dmitrii    |                      | Sadykov     |        |        |
| Residence Information (Select One) <input type="radio"/> US Residency <input checked="" type="radio"/> Non US Residency <input type="radio"/> Active US Military Service |            |                      |             |        |        |
| City                                                                                                                                                                     | Yerevan    | Country of Residence | AM          |        |        |

**Mailing Address of Inventor:**

|             |                           |                |    |  |  |
|-------------|---------------------------|----------------|----|--|--|
| Address 1   | 228 Park Ave S, Pmb 85451 |                |    |  |  |
| Address 2   |                           |                |    |  |  |
| City        | New York                  | State/Province | NY |  |  |
| Postal Code | 10003                     | Country        | US |  |  |

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button.

Add

**Correspondence Information:**

IPR2026-00275

Krisp Technologies EX1002 Page 10

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

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 | 85162                 |           |              |
| Email Address   | gkhayet@ipjurists.com | Add Email | Remove Email |

## Application Information:

|                                         |                                                        |                                           |                                     |
|-----------------------------------------|--------------------------------------------------------|-------------------------------------------|-------------------------------------|
| Title of the Invention                  | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                                           |                                     |
| Attorney Docket Number                  | 1234.001US1                                            | Small Entity Status Claimed               | <input checked="" type="checkbox"/> |
| Application Type                        | Nonprovisional                                         |                                           |                                     |
| Subject Matter                          | Utility                                                |                                           |                                     |
| Total Number of Drawing Sheets (if any) | 12                                                     | Suggested Figure for Publication (if any) |                                     |

## Filing By Reference:

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

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

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

## 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: | <input checked="" type="radio"/> Customer Number | <input type="radio"/> US Patent Practitioner | <input type="radio"/> Limited Recognition (37 CFR 11.9) |
| Customer Number    | 85162                                            |                                              |                                                         |
|                    | IPR2026-00275                                    |                                              |                                                         |

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

## Domestic Benefit/National Stage Information:

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

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

|                                                                                                                       |                               |                          |                                    |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------|--------------------------|------------------------------------|
| Prior Application Status                                                                                              | Pending                       |                          | Remove                             |
| Application Number                                                                                                    | Continuity Type               | Prior Application Number | Filing or 371(c) Date (YYYY-MM-DD) |
|                                                                                                                       | Claims benefit of provisional | 63297901                 | 2022-01-10                         |
| Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the <b>Add</b> button. |                               |                          | Add                                |

## Foreign Priority Information:

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

|                                                                                                        |                      |                          |                                          |        |
|--------------------------------------------------------------------------------------------------------|----------------------|--------------------------|------------------------------------------|--------|
| Application Number                                                                                     | Country <sup>i</sup> | Filing Date (YYYY-MM-DD) | Access Code <sup>j</sup> (if applicable) | Remove |
|                                                                                                        |                      |                          |                                          |        |
| Additional Foreign Priority Data may be generated within this form by selecting the <b>Add</b> 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.

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

## 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.

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

## 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.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                        |                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------|
| <b>Applicant</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                                                      | <a href="#">Remove</a>                           |
| <p>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.</p> |                                                        |                                                  |
| <a href="#">Clear</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                        |                                                  |
| <input checked="" type="radio"/> 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:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        |                                                  |
| <div> <div></div> <div></div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                        |                                                  |
| Name of the Deceased or Legally Incapacitated Inventor: <input type="text"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                        |                                                  |
| If the Applicant is an Organization check here. <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                        |                                                  |
| Organization Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="text" value="Intone Inc."/>               |                                                  |
| <b>Mailing Address Information For Applicant:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                        |                                                  |
| Address 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="text" value="228 Park Ave S, Pmb 85451"/> |                                                  |
| Address 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="text"/>                                   |                                                  |
| City                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <input type="text" value="New York"/>                  | State/Province                                   |
| Country                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="text" value="US"/>                        | Postal Code                                      |
| Phone Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="text"/>                                   | Fax Number                                       |
| Email Address                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="text"/>                                   |                                                  |
| Additional Applicant Data may be generated within this form by selecting the Add button. <a href="#">Add</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                        |                                                  |

## 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.

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                      |                      |                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|---------------------------------------|
| <b>Assignee</b>                                                                                                                                                                                                                                                                                                                                                                                                                                        | 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. |                      |                      |                      |                                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |                      |                      | <input type="button" value="Remove"/> |
| If the Assignee or Non-Applicant Assignee is an Organization check here.                                                                                                                                                                                                                                                                                                                                                                               |                      |                      |                      | <input type="checkbox"/>              |
| Prefix                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Given Name           | Middle Name          | Family Name          | Suffix                                |
| <input type="text"/>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/>                  |
| <b>Mailing Address Information For Assignee including Non-Applicant Assignee:</b>                                                                                                                                                                                                                                                                                                                                                                      |                      |                      |                      |                                       |
| Address 1                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <input type="text"/> |                      |                                       |
| Address 2                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      | <input type="text"/> |                      |                                       |
| City                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | State/Province       | <input type="text"/> |                                       |
| Country <sup>i</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="text"/> | Postal Code          | <input type="text"/> |                                       |
| Phone Number                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="text"/> | Fax Number           | <input type="text"/> |                                       |
| Email Address                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="text"/> |                      |                      |                                       |
| Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.                                                                                                                                                                                                                                                                                                                                      |                      |                      |                      | <input type="button" value="Add"/>    |

**Signature:**

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

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

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

|                                                                                     |                  |           |                   |                                    |
|-------------------------------------------------------------------------------------|------------------|-----------|-------------------|------------------------------------|
| <b>Signature</b>                                                                    | /Georgiy Khayet/ |           | Date (YYYY-MM-DD) | 2022-12-16                         |
| First Name                                                                          | Georgiy          | Last Name | Khayet            | Registration Number                |
|                                                                                     |                  |           |                   | 59595                              |
| Additional Signature may be generated within this form by selecting the Add button. |                  |           |                   | <input type="button" value="Add"/> |

|                                           |                                                        |                        |             |
|-------------------------------------------|--------------------------------------------------------|------------------------|-------------|
| <b>Application Data Sheet 37 CFR 1.76</b> |                                                        | Attorney Docket Number | 1234.001US1 |
|                                           |                                                        | Application Number     |             |
| Title of Invention                        | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                        |             |

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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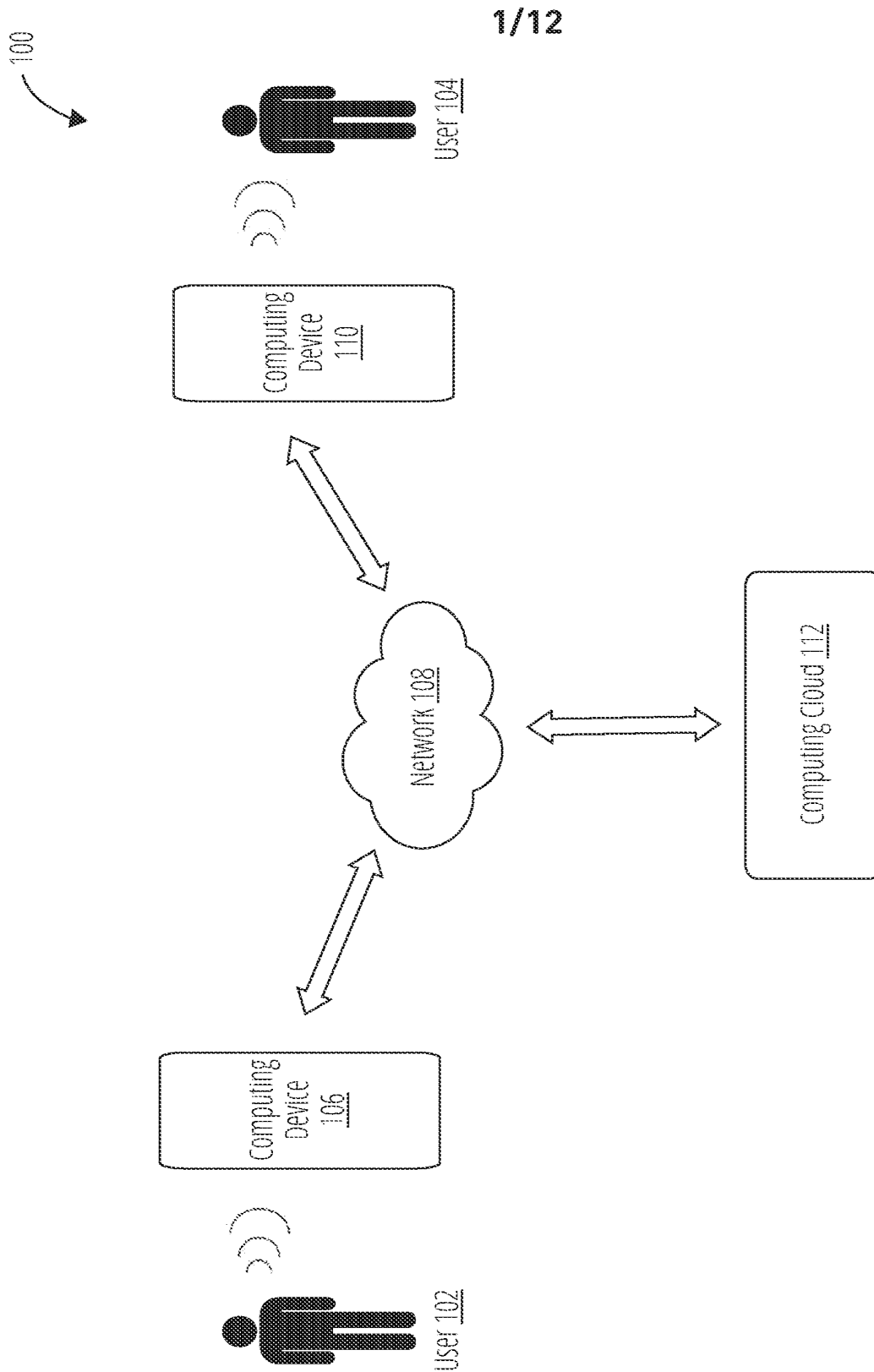


FIG. 1

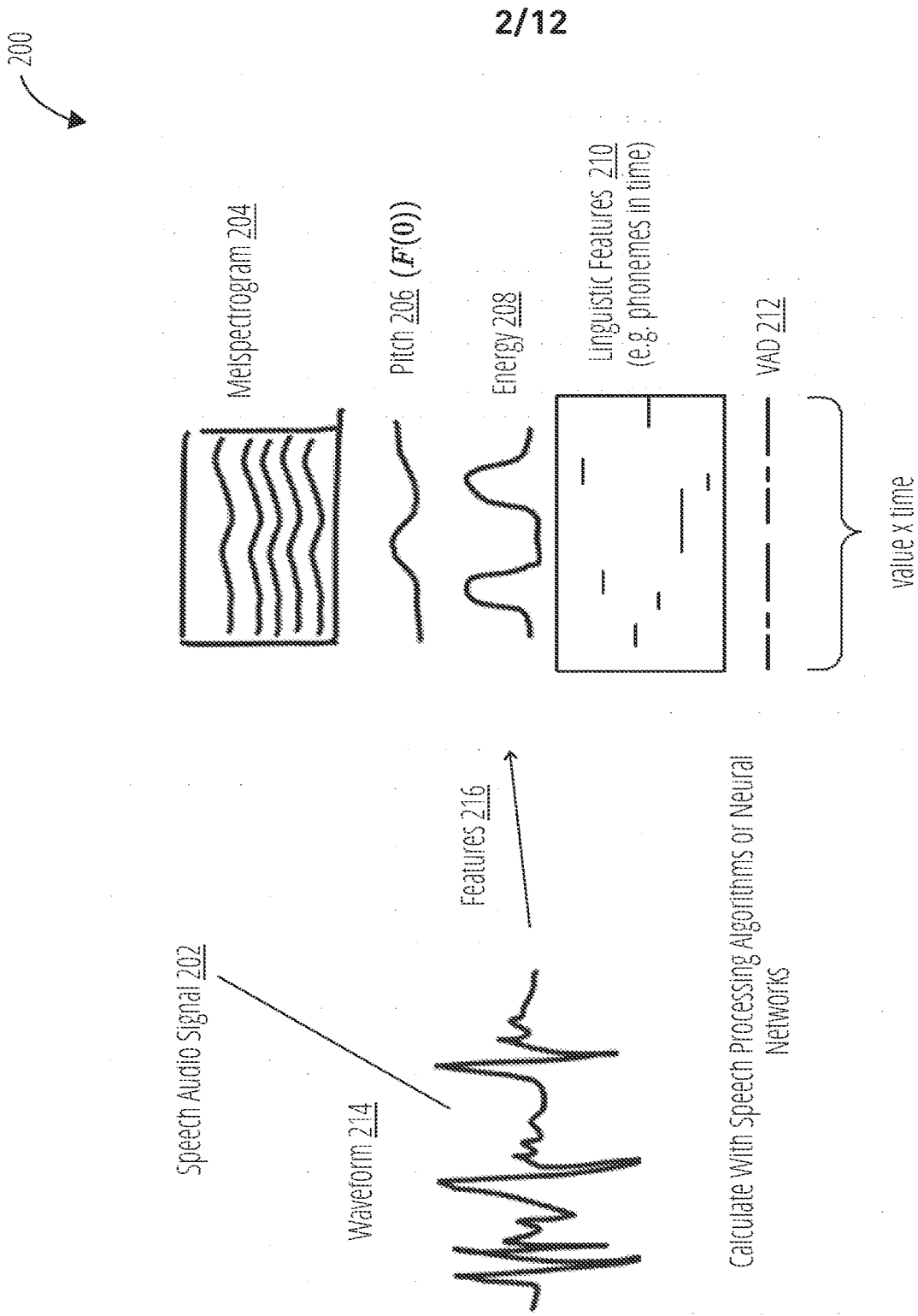


FIG. 2

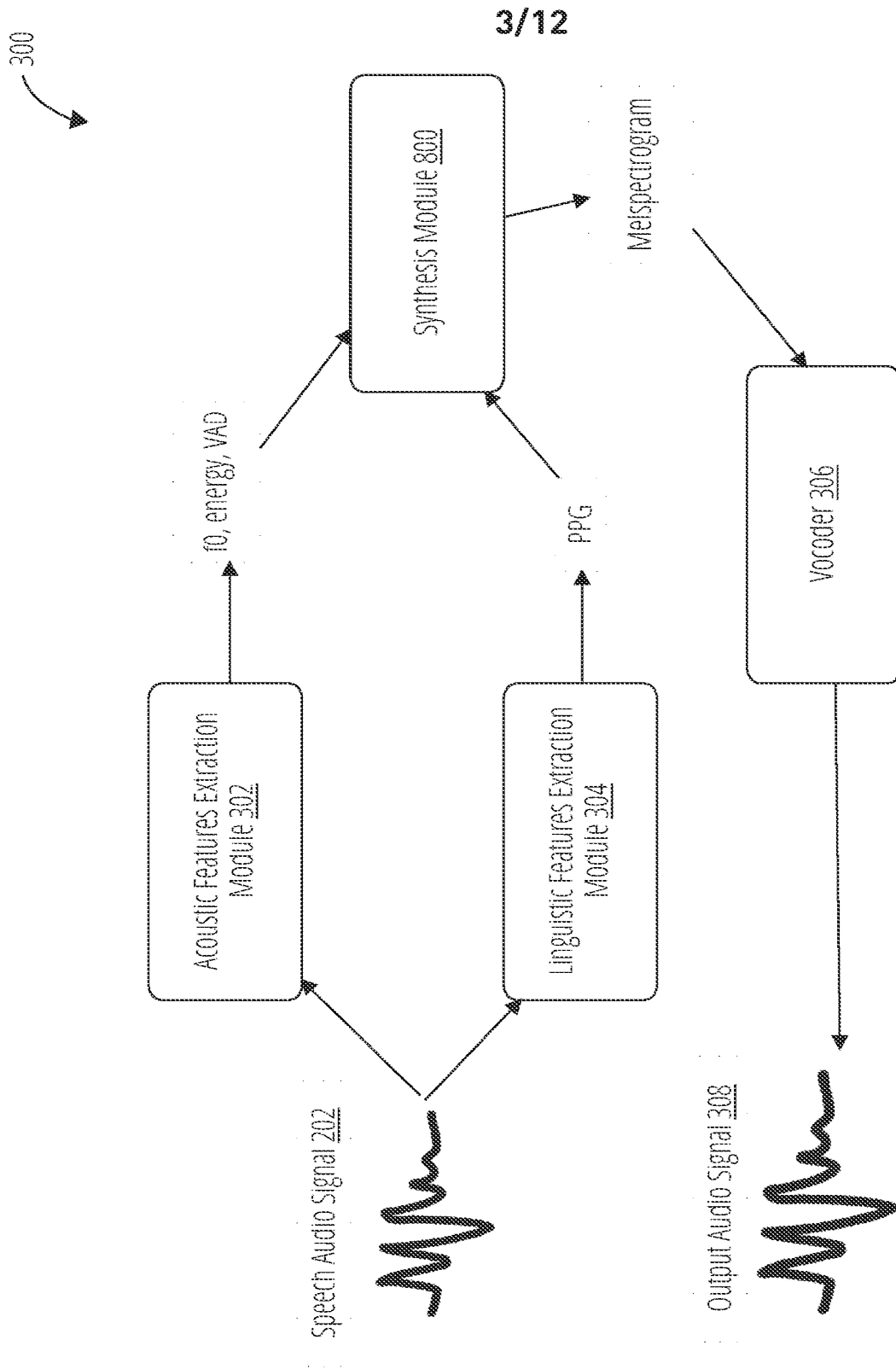


FIG. 3

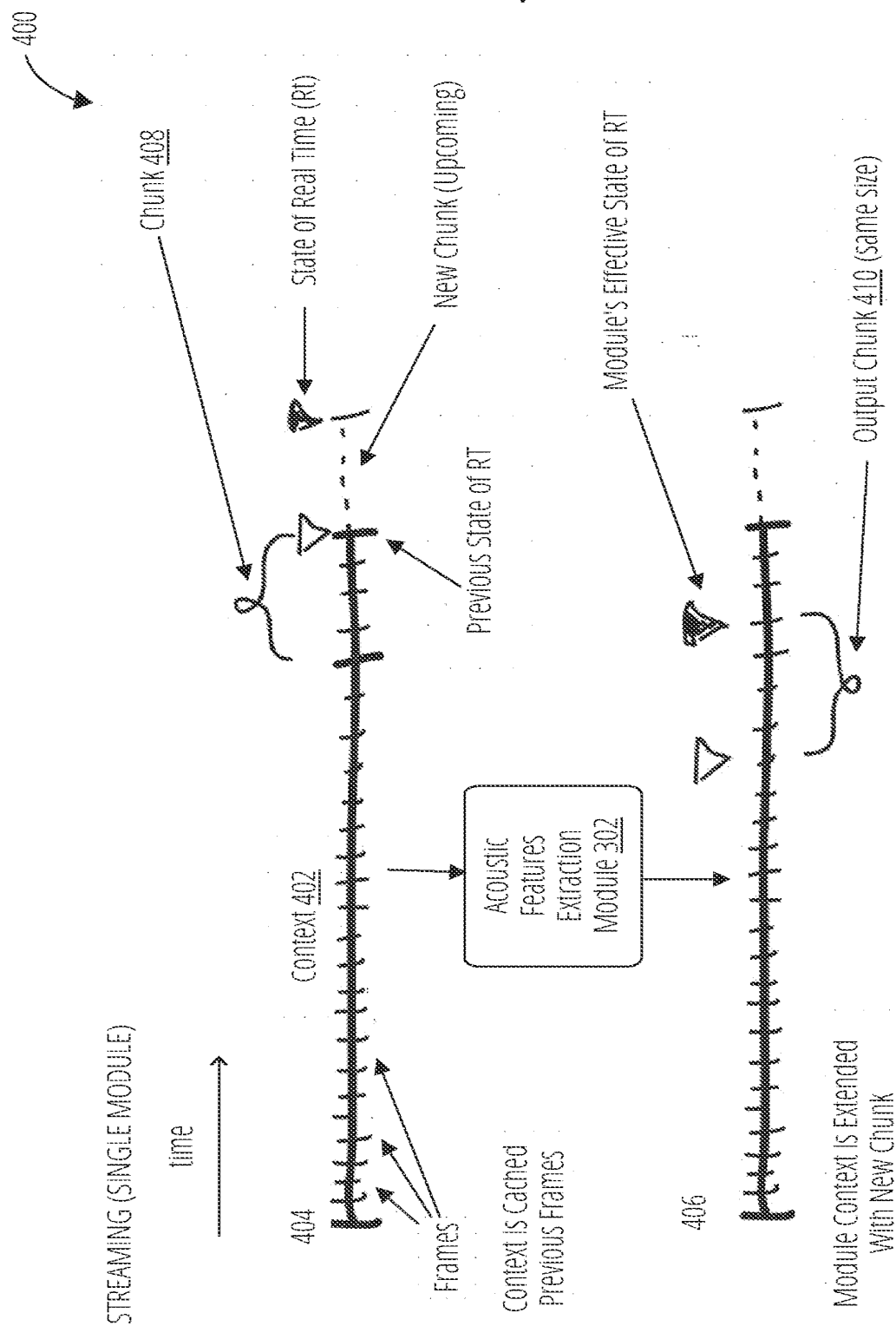


FIG. 4

500

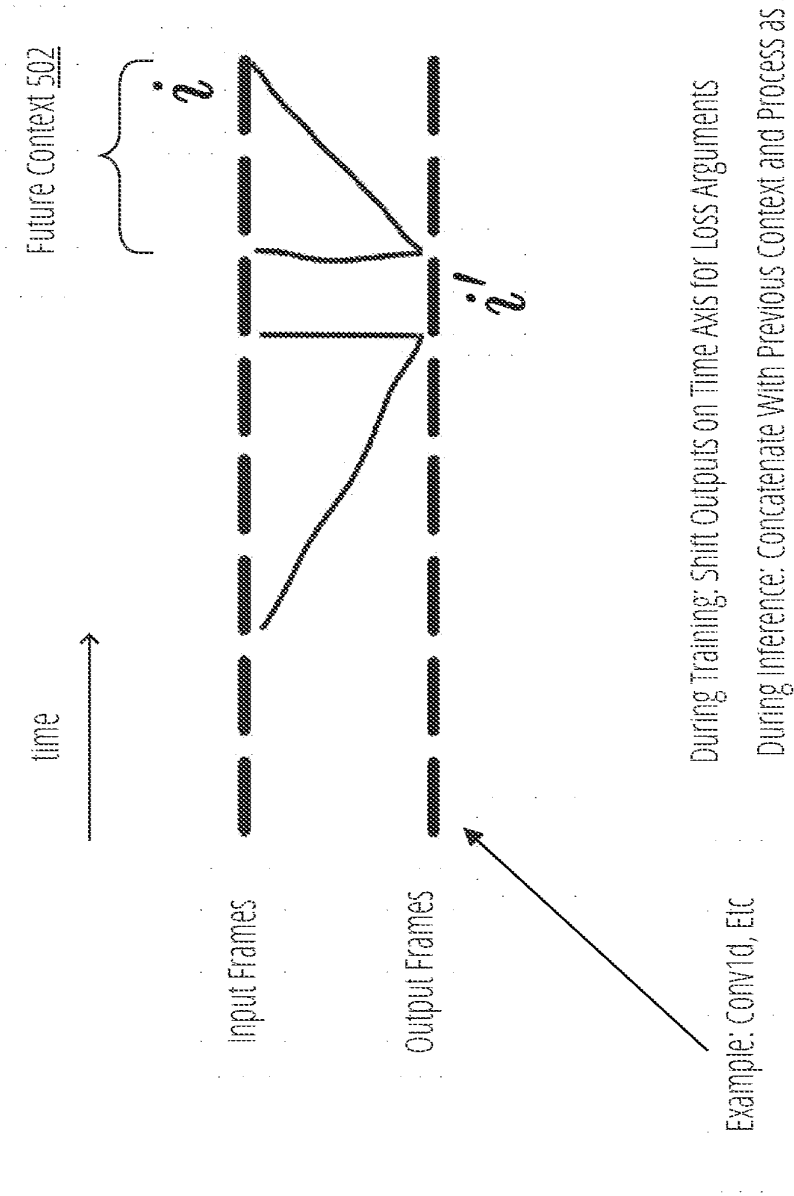


FIG. 5

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600

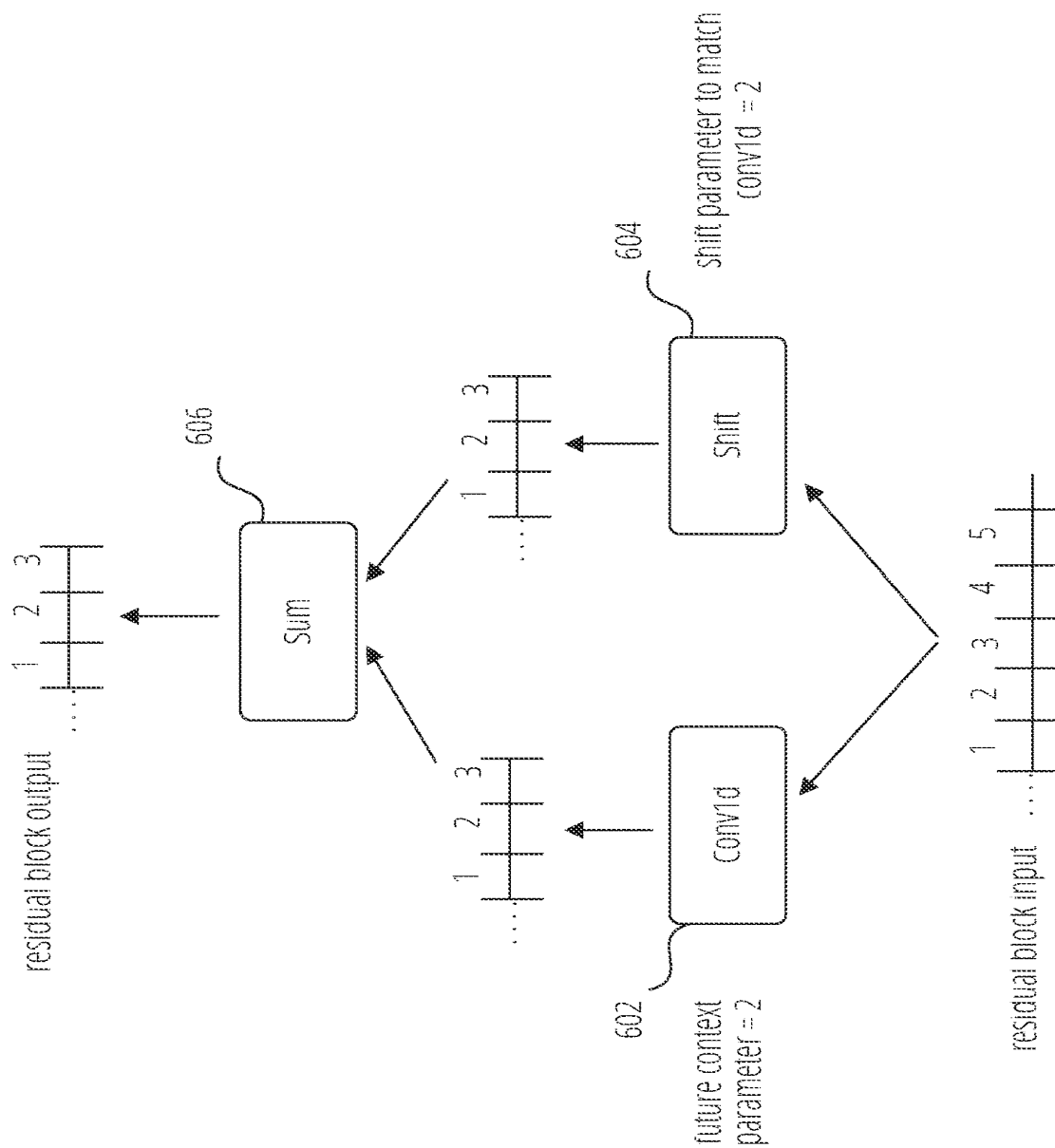


FIG. 6

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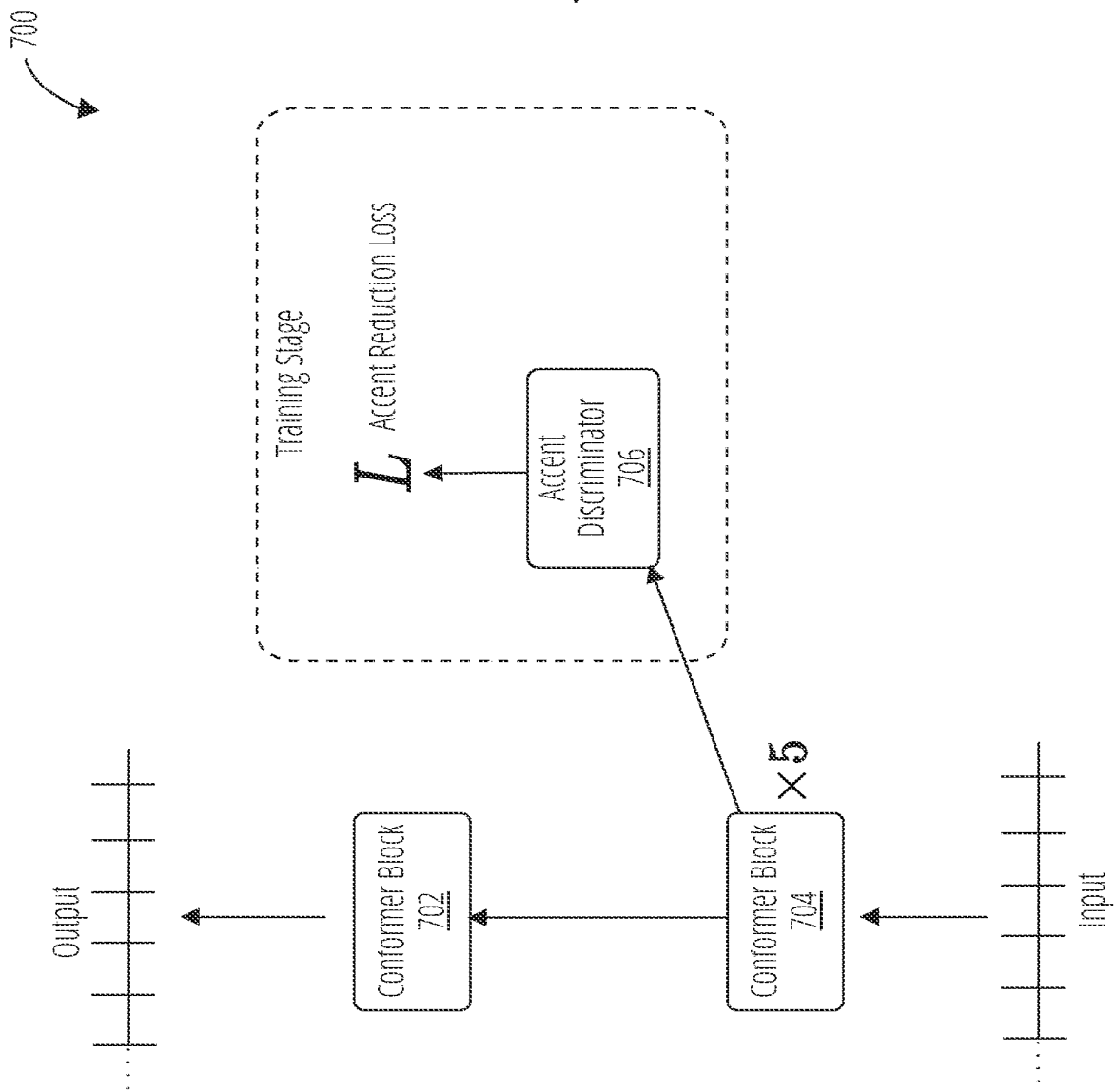


FIG. 7

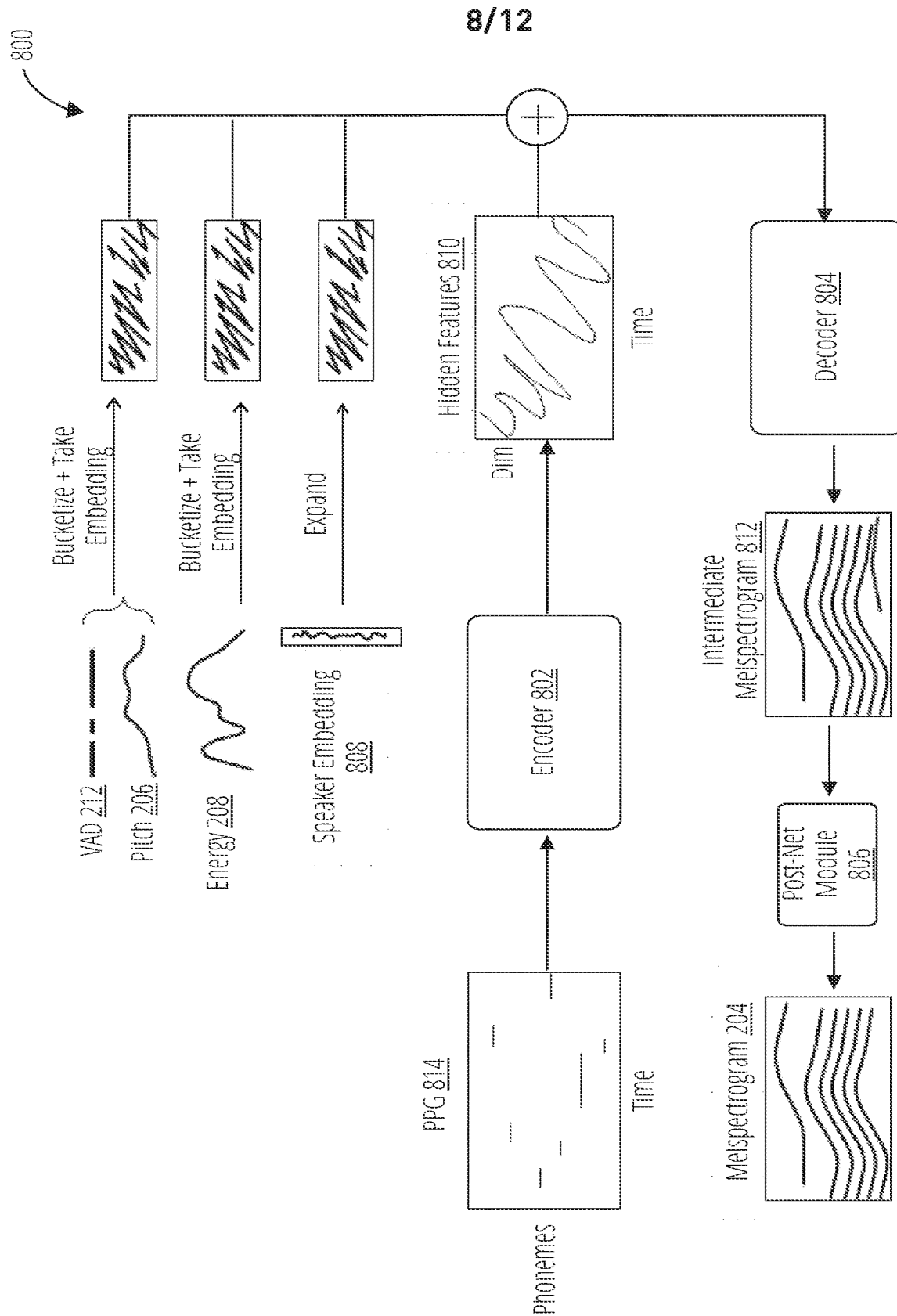


FIG. 8

900

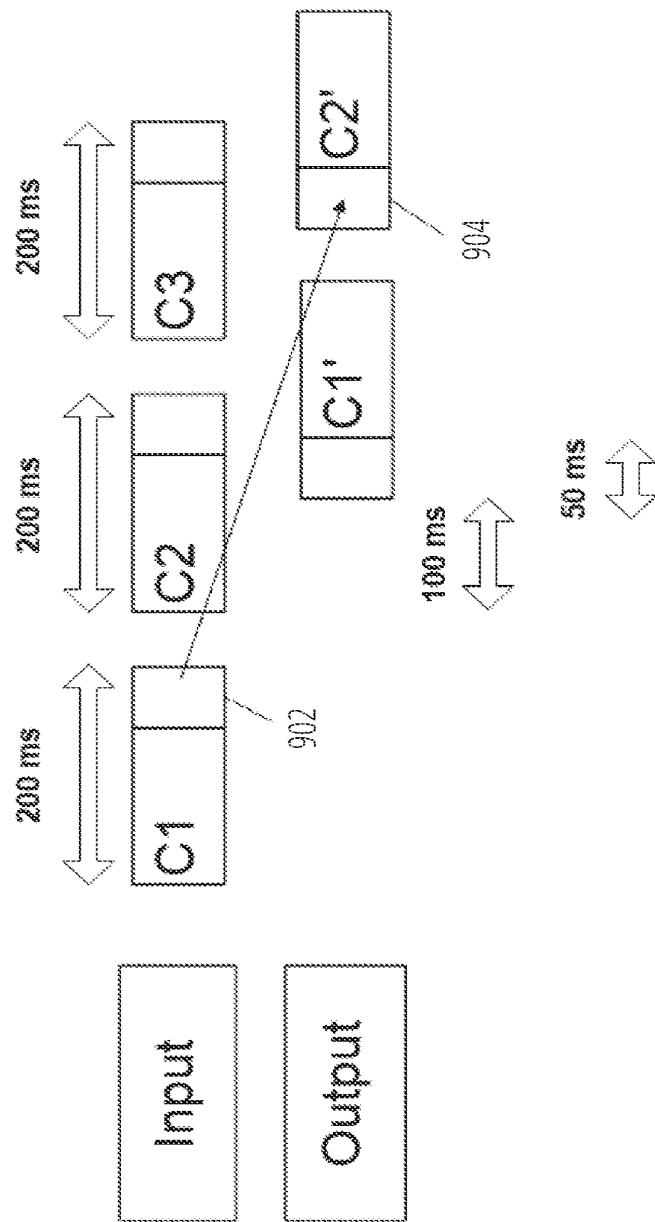


FIG. 9

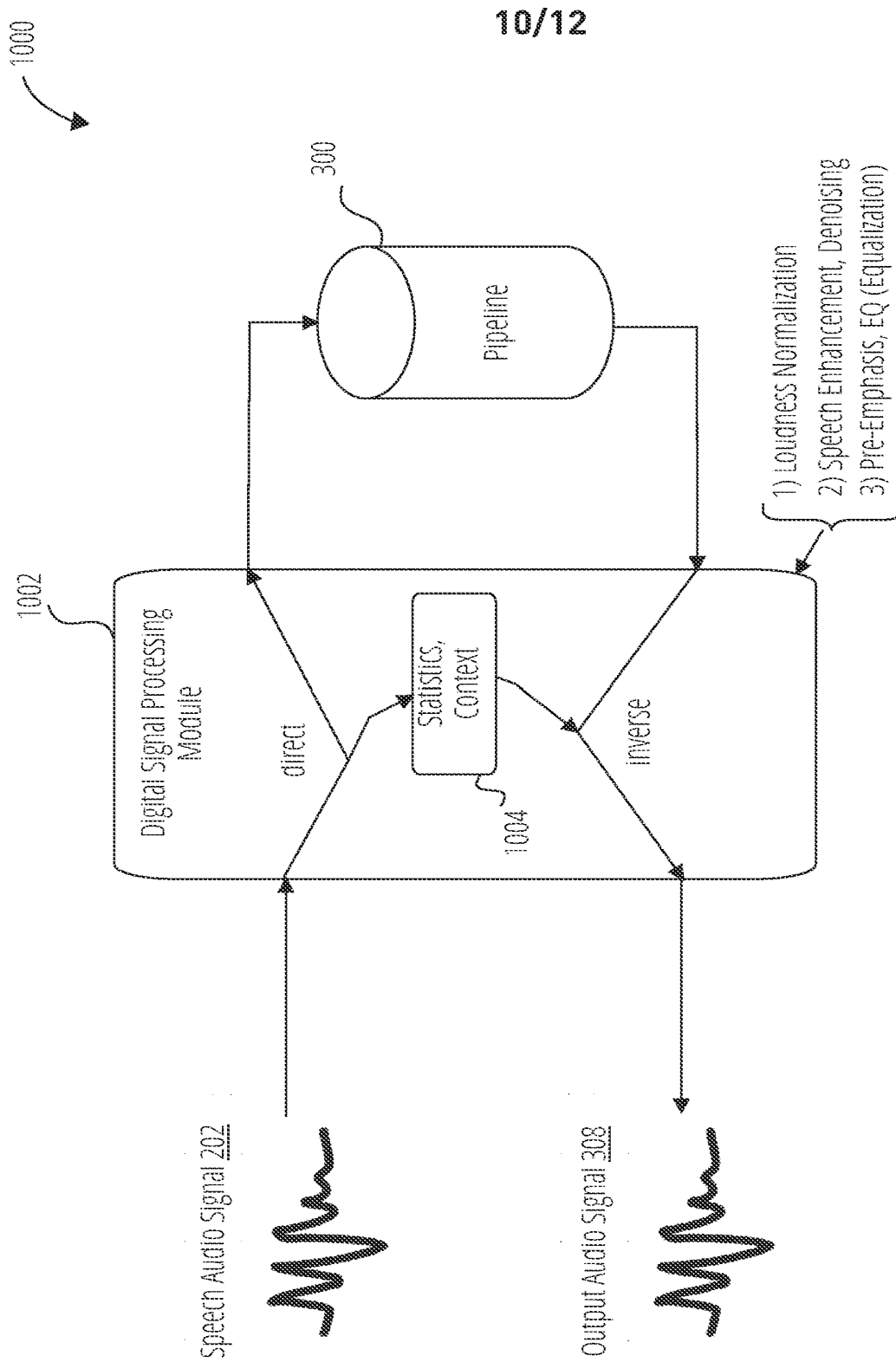
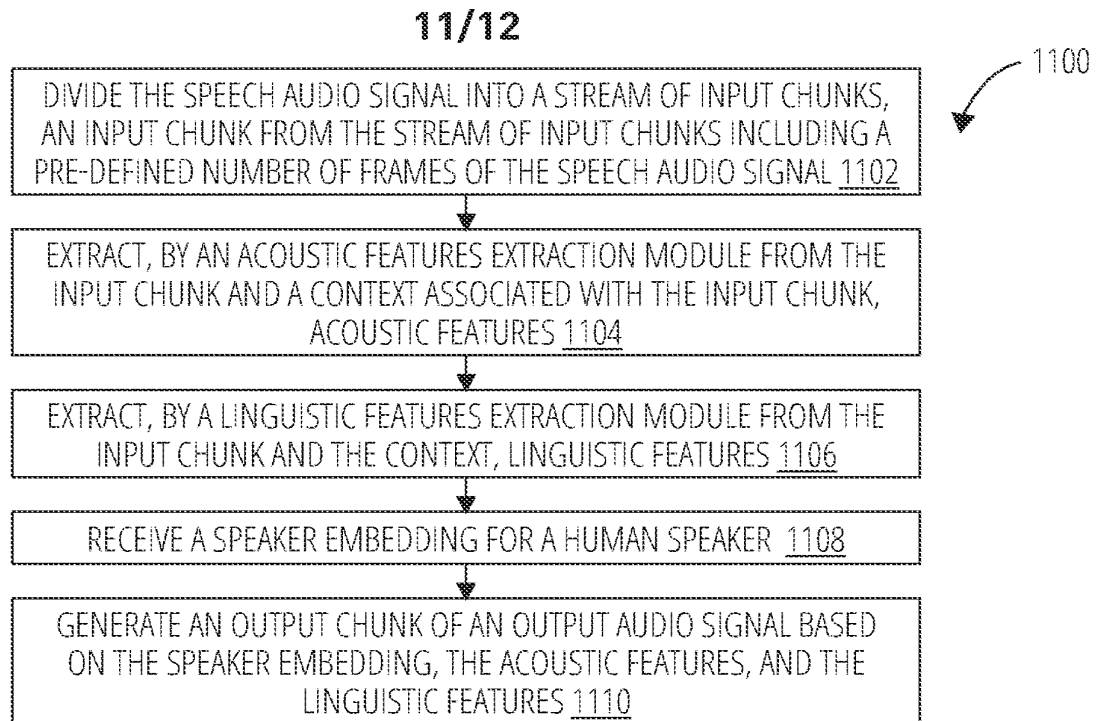


FIG. 10

**FIG. 11**

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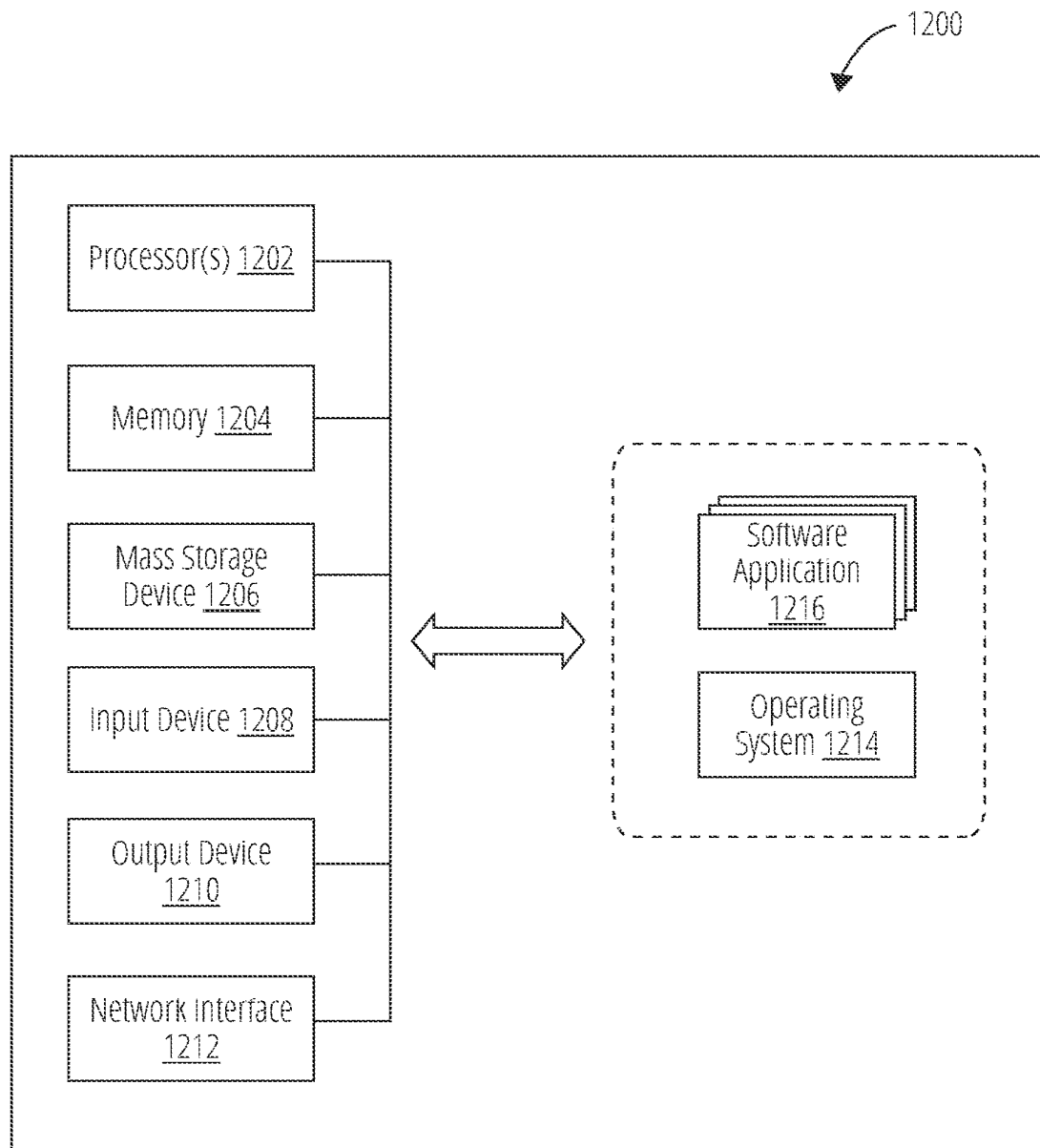


FIG. 12

## REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

### CROSS-REFERENCE TO RELATED APPLICATIONS

**[0001]** The present application claims priority of U.S. Provisional Patent Application No. 63/297,901 filed on January 10, 2022, entitled “Real Time Correction of Accent in Speech Audio Signals,” which is incorporated herein by reference in its entirety for all purposes.

### TECHNICAL FIELD

**[0002]** This disclosure generally relates to audio processing. More particularly, this disclosure relates to systems and methods for real-time correction of accent in speech audio signals.

### BACKGROUND

**[0003]** Audio conversations, such as audio chats, audio and video calls, and audio and video meetings are in wide use. One of the main problems encountered during an audio or video conversation is that speakers may possess strong accents that are difficult to understand by other participants. Existing solutions for correcting accent in audio signals are not very effective in real-time conversations.

### SUMMARY

**[0004]** This summary is provided to introduce a selection of concepts in a simplified form that are further described in the Detailed Description below. This summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

**[0005]** According to one example embodiment of the present disclosure, a method for real-time correction of an accent in a speech audio signal is provided. The method can be implemented by a computing device and includes dividing the speech audio signal into a stream of input chunks. The input chunk from the stream of input chunks can include a pre-defined number of frames of the speech audio signal. The method may also include extracting, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features. The method may also include extracting, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent or accent-agnostic linguistic features. The method may also include receiving a

speaker embedding for a human speaker. The method may also include generating an output chunk of an output audio signal based on the speaker embedding, the acoustic features, and the linguistic features. The generation of the output chunk may include providing the speaker embedding, the acoustic features, and the linguistic features to a synthesis module to generate a melspectrogram with the reduced accent and, providing the melspectrogram to a vocoder to generate an output chunk of an output audio signal.

**[0006]** The context may include a pre-determined number of the frames belonging to chunks preceding the input chunk in the stream of input chunks. The speaker embedding can be pretrained based on audio data including a recorded speech of a target speaker having a further accent. Alternatively, the speaker embedding can be generated based on the speech audio signal in real-time.

**[0007]** The speech audio signal can be recorded from the voice of a user by the computing device via an acoustic sensor. A delay between the first timestamp and the second timestamp can be between 40 milliseconds and 300 milliseconds, where the first timestamp corresponds to the time when the chunk of the speech audio signal is recorded and the second timestamp corresponds to the time when the output chunk is generated.

**[0008]** The linguistic features may include one of the following: phonetic posteriorgrams with a standardized phonetic dictionary or phonetic posteriorgrams with a data-driven phonetic library. The linguistic features extraction module may include a neural network trained based on audio data to output the linguistic features. The neural network can be trained using a loss function to reduce, in the linguistic features, contributions due to a further accent present in the audio data.

**[0009]** The acoustic features can include a pitch of the speech audio signal, energy of the speech audio signal, and value of a voice activity detector, the voice activity detector indicating absence of human voice in the speech audio signal or presence of human voice in the speech audio signal.

**[0010]** The synthesis module may include an encoder, a decoder, and a post-net module designed to improve output of the decoder. Generating the melspectrogram may include processing the linguistic features by the encoder to generate hidden features, combining the hidden features, the acoustic features, and the speaker embeddings to generate further features, and processing the further features by the decoder and the post-net module to generate the melspectrogram.

**[0011]** The method may also include, prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust one or more characteristics of the speech audio signal to improve extraction of the linguistic features and the acoustic features.

**[0012]** The method may also include, prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust loudness of the speech audio signal from a first level to a second level. The method may also include, after generating the output chunk of the output audio signal, processing the output chunk by the digital signal processing module, to adjust loudness of the output audio signal to the first level.

**[0013]** According to another embodiment, a system for real-time correction of an accent in a speech audio signal is provided. The system may include at least one processor and a memory storing processor-executable codes, wherein the processor can be configured to implement the operations of the above-mentioned method for real-time correction of an accent in a speech audio signal.

**[0014]** According to yet another aspect of the disclosure, there is provided a non-transitory processor-readable medium, which stores processor-readable instructions. When the processor-readable instructions are executed by a processor, they cause the processor to implement the above-mentioned method for real-time correction of an accent in a speech audio signal.

**[0015]** Additional objects, advantages, and novel features will be set forth in part in the detailed description section of this disclosure, which follows, and in part will become apparent to those skilled in the art upon examination of this specification and the accompanying drawings or may be learned by production or operation of the example embodiments. The objects and advantages of the concepts may be realized and attained by means of the methodologies, instrumentalities, and combinations particularly pointed out in the appended claims.

#### BRIEF DESCRIPTION OF THE DRAWINGS

**[0016]** Embodiments are illustrated by way of example and not limitation in the figures of the accompanying drawings, in which like references indicate similar elements.

**[0017]** FIG. 1 shows an example environment, wherein a method for real-time correction of accent in speech audio signals can be practiced.

**[0018]** FIG. 2 is a schematic showing features that can be extracted from a speech audio signal, according to some example embodiments of the present disclosure.

**[0019]** FIG. 3 is a block diagram showing a pipeline for real-time correction of an accent in speech audio signals, according to an example embodiment.

**[0020]** FIG. 4 is a schematic showing details of dividing a speech audio signal into chunks for forming input data to modules of the pipeline, according to an example embodiment.

**[0021]** FIG. 5 is a schematic showing details of processing input frames during a training stage of submodules and modules of the pipeline, according to an example embodiment.

**[0022]** FIG. 6 is a schematic showing details of summation of a context in an example module 600, according to an example embodiment.

**[0023]** FIG. 7 shows a part of an example neural network trained to generate linguistic accent-agnostic features, according to an example embodiment.

**[0024]** FIG. 8 is a block diagram showing blocks of a synthesis module, according to an example embodiment.

**[0025]** FIG. 9 is a schematic showing details of streaming of a speech audio signal, according to some example embodiment.

**[0026]** FIG. 10 is a block diagram showing a digital signal processing module for use with a system for real-time correction of accent in speech audio signals, according to some example embodiments.

**[0027]** FIG. 11 is a flow chart showing a method 1100 for real-time correction of accent in speech audio signals, according to some example embodiments.

**[0028]** FIG. 12 is a high-level block diagram illustrating an example computer system, within which a set of instructions for causing the machine to perform any one or more of the methodologies discussed herein can be executed.

Docket No. 1234.001US1  
DETAILED DESCRIPTION

**[0029]** The following detailed description of embodiments includes references to the accompanying drawings, which form a part of the detailed description. Approaches described in this section are not prior art to the claims and are not admitted to be prior art by inclusion in this section. The drawings show illustrations in accordance with example embodiments. These example embodiments, which are also referred to herein as “examples,” are described in enough detail to enable those skilled in the art to practice the present subject matter. The embodiments can be combined, other embodiments can be utilized, or structural, logical, and operational changes can be made without departing from the scope of what is claimed. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope is defined by the appended claims and their equivalents.

**[0030]** For purposes of this patent document, the terms “or” and “and” shall mean “and/or” unless stated otherwise or clearly intended otherwise by the context of their use. The term “a” shall mean “one or more” unless stated otherwise or where the use of “one or more” is clearly inappropriate. The terms “comprise,” “comprising,” “include,” and “including” are interchangeable and not intended to be limiting. For example, the term “including” shall be interpreted to mean “including, but not limited to.” The terms “can” and “may” shall mean “possibly be, but not limited to be.”

**[0031]** This disclosure relates to methods and systems for real-time correction of accent in speech audio signals. Some embodiments of the present disclosure may be implemented in audio and video conversations to remove an accent in a speech audio signal captured from of a speaker uttering speech in a language that is not native to the speaker or a dialect of the same language that is different from the dialect spoken by other participants. Specifically, the speech audio signal can be analyzed in real time in chunks to extract acoustic features and linguistic features. The acoustic features and linguistic features can be then used to synthesize a melspectrogram lacking accent of the speaker. The melspectrogram can be used by a vocoder to generate an output audio signal lacking the accent.

**[0032]** In contrast to the existing solutions, embodiments of the present disclosure allow to reduce the delay between recording a chunk of the speech acoustic signal and outputting corresponding chunk of the output audio signal to 40-300 milliseconds.

**[0033]** FIG. 1 shows an example environment 100, wherein a method for real-time correction of accent in speech audio signals can be practiced. It should be noted, however, that the

environment 100 is just one example and is a simplified embodiment provided for illustrative purposes, and reasonable deviations of this embodiment are possible as will be evident to those skilled in the art.

**[0034]** As shown in FIG. 1, environment 100 may include a user 102, a user 104, a computing device 106, a computing device 110, a network 108, and a cloud-based computing resource 112 (also referred to as a computing cloud 112).

**[0035]** The computing device 106 and computing device 110 each may include a sound sensor, memory, processor, communication unit, and output device. The memory may be configured to store processor-readable (machine-readable) instructions or codes, which when performed by the processor, cause the computing device 106 (or computing device 110) to perform at least some steps of methods for real-time correction of accent in speech audio signals as described herein. The processor may perform floating point operations, complex operations, and other operations, including performing speech recognition and analysis based on ambient acoustic signals captured by sound sensor(s). The processors may include general purpose processors, video processors, audio processing systems, a central processing unit (CPU), a graphics processing unit (GPU), and so forth. The sound sensor(s) can include one or more microphones. The sound sensor(s) can be spaced a distance apart to allow the processor to perform a noise and/or echo reduction in received acoustic signals. The output device(s) may comprise one or more speaker(s), an earpiece of a headset, or a handset.

**[0036]** In various embodiments, the computing device 106 and computing device 110 can be configured to communicate with a network 108 such as the Internet, wide area network (WAN), local area network (LAN), cellular network, and so forth, to receive and send audio data.

**[0037]** The computing device 106 and computing device 110 can refer to a mobile device such as a mobile phone, smartphone, or tablet computer, a personal computer, laptop computer, netbook, set top box, television device, multimedia device, personal digital assistant, game console, entertainment system, infotainment system, vehicle computer, or any other computing device. The computing device 106 can be communicatively connected to the computing device 110 and the computing cloud 112 via network 150.

**[0038]** The network 108 can include any wired, wireless, or optical networks including, for example, the Internet, intranet, local area network (LAN), Personal Area Network (PAN), Wide Area Network (WAN), Virtual Private Network (VPN), cellular phone networks (e.g., Global System for Mobile (GSM) communications network, packet switching communications

network, circuit switching communications network), Bluetooth™ radio, Ethernet network, an IEEE 602.11-based radio frequency network, a Frame Relay network, Internet Protocol (IP) communications network, or any other data communication network utilizing physical layers, link layer capability, or network layer to carry data packets, or any combinations of the above-listed data networks. In some embodiments, network 108 may include a corporate network, data center network, service provider network, mobile operator network, or any combinations thereof.

**[0039]** Computing cloud 112 can be shared by multiple users and be dynamically re-allocated based on demand. Computing cloud 112 can include one or more server farms and clusters including a collection of computer servers which can be co-located with network switches or routers.

**[0040]** According to one example embodiment, user 102 may communicate with user 104 through a voice call using a messenger or send voice messages via the messenger. The voice of the user 102 can be captured by the sound sensor of the computing device 106 to generate a speech audio signal. The user 102 may not be a native speaker of the language the user 102 speaks, so the speech audio signal may include an accent of the user 102. The speech audio signal can be further modified to remove or reduce the accent of the user 102 in the speech audio signal.

**[0041]** In one embodiment, the modification of the speech audio signal can be carried out by a processor of computing device 106. The modified speech audio signal can be sent, via the communication unit of the computing device 106, to the computing device 110. The computing device 110 may play back the modified speech audio signal via output device(s). Thus, user 104 may listen to the modified speech audio signal instead of the speech of the user 102.

**[0042]** In other embodiments, the speech audio signal can be sent to the computing cloud 112. In some embodiments, the speech audio signal can be sent to the computing cloud 112 using voice over internet protocol (VoIP). Computing cloud 112 can modify the speech audio signal to remove or correct the accent of the user 102 from the speech audio signal. Computing cloud 112 can send the modified speech audio signal to the computing device 110.

**[0043]** FIG. 2 is a schematic showing features 216 that can be extracted from a speech audio signal 202, according to some example embodiments of the present disclosure. The speech audio signal 202 may include waveforms 214. The features 216 can be calculated per each time frame x. The features 216 may include acoustic features and linguistic features 210. The

acoustic features may include pitch 206 (or main frequency (F0)), energy 208 (signal amplitude), and voice activity detection (VAD) 212. VAD 212 is a flag indicating the presence or absence of voice in the time frame.

**[0044]** Each of the features 216 is aligned with the others in time. Values of each feature are equidistant in time with respect to the values of the same feature obtained from the neighboring time frames. Accordingly, each of the features 216 is obtained from a chunk of speech audio signal 202 corresponding to an equal time period.

**[0045]** The melspectrogram 210 can be generated based on the acoustic features and linguistic features 210 as described herein.

**[0046]** FIG. 3 is a block diagram showing a pipeline 300 for real-time correction of an accent in speech audio signals, according to an example embodiment. The pipeline 300 may include an acoustic features extraction module 302, a linguistic features extraction module 304, a synthesis module 800, and a vocoder 306.

**[0047]** The acoustic features extraction module 302 may extract, from a time frame of the speech audio signal 202, the acoustic features including pitch 206 (F0), energy 208, and VAD 212. These acoustic features can be obtained by algorithmic methods for signal processing or neural networks.

**[0048]** The linguistic features extraction module 304 may extract, from a time frame of the speech audio signal 202, linguistic features 210. In some embodiments, linguistic features 210 may include hidden features of an Automatic Speech Recognition (ASR) neural network with additional custom training and transformations or phonemes belonging to a phoneme set for a predetermined language. For example, the phoneme set may include ARPAbet phoneme set for English or classes (called pseudo-labels) of some clusterization algorithm over linguistic acoustic features of English speech data, like mel-spectrogram or hidden features of the ASR neural network. The phonemes can be obtained by a neural network trained to recognize and classify phonemes. In certain embodiments, the linguistic features 210 can be represented as Phonetic PosteriorGrams (PPGs). PPG can be defined as a distribution of the posterior probabilities of each phonetic class for each specific time frame of the speech audio signal 202. Even though embodiments of the present disclosure are described as utilizing PPGs, the present technology can be practiced with any linguistic features.

**[0049]** The acoustic features and linguistic features can be provided to the synthesis module 800. The synthesis module 800 may generate melspectrogram 204 corresponding to speech of

the user 102 with removed or reduced accent. The melspectrogram 204 can be provided to the vocoder 306. The vocoder 306 may generate output audio signal 308.

**[0050]** FIG. 4 is a schematic 400 showing details of dividing a speech audio signal 202 into chunks for forming input data to modules of the pipeline 300. The speech audio signal 202 can be provided to the modules (for example acoustic features extraction module 302) as a stream 404 of chunks. Each chunk may include a pre-determined number of frames. Each of the frames is a portion of the speech audio signal 202 of a predetermined time interval size. In some embodiments, the length of each of the frame can be, for example, 11.6 milliseconds (ms).

**[0051]** An input to module 302 may include a chunk 408 of frames concatenated with a context 402. The context 402 may include a pre-determined number of frames of the speech audio signal 202 preceding the chunk 408. Context 402 can be stored in a cache of module 302 and continuously updated. Thus, at each state of real time, input of the modules can include the chunk 408 ended at the previous state of real time and the context 402 corresponding to the chunk.

**[0052]** The output of module 302 is stream 440. The stream 404 may include chunks of one of acoustic features (pitch 206 (F0), energy 208, or VAD 212). Output chunk 410 can be formed by cutting, from the output stream 406, a chunk that ends at an effective state of real time in module 302. The context 402 can be extended by chunk 408. The first chunk in the context 402 can be removed. Thus, the modified context 402 can be used for processing the next chunk from the stream 404. The output chunk 410 can be provided to the synthesis module 800 (shown in FIG. 3). Similarly, module 304 (shown in FIG. 3) may produce a stream of chunks of linguistic features. The chunks of linguistic features can also be provided to the synthesis module 800.

**[0053]** Overall, input of the synthesis module 800 includes a stream of chunks of linguistic features 225 (PPGs), a stream of chunks of values of pitch 206 (F0), a stream of chunks of values of energy 208, and a stream of chunks of values of VAD 212, all the streams being aligned with each other. The output of the synthesis module 800 module and, correspondently, the input of the vocoder 306, includes a stream of chunks of melspectrogram 204. Similarly, to module 302, each of the modules 304, 800, and 306 may have a cache to store a context including predetermined number of previous frames of the corresponding features. The above architecture of streaming chunks to every one of modules 302, 304, 800, and 306 can be

applied recursively to internal submodules of these modules, such as neural network blocks and layers.

**[0054]** In further embodiments, the context can be also cached for submodules of the modules 302, 304, 800, and 306. For example, acoustic features extraction module 302 may include one or more of the following submodules: 1D convolution layer (Conv1d), attention layer, and variance predictors. Each of the submodules may include cache for storing the context of output of corresponding preceding submodule in the acoustic features extraction module 302. The preceding submodule may output a stream of chunks of internal features corresponding to stream 404. The input to the next submodule in module 302 may include the last output chunk produced by the preceding submodule and the context including a predetermined number of previous frames of chunks produced by the preceding submodule.

**[0055]** Caching context for inner submodules of modules 302, 304, 800, and 306 (outer modules) may allow to achieve same output quality for modules 302, 304, 800, and 306 between training stage and streaming (inference) stage because a future context of an outer module originates from future contexts of inner submodules. Every layer in sequential part of a neural network that implements one of the modules 302, 304, 800, and 306 can be part of the future context. The parts of the future context can be summed up to receive total a future context of the outer module. The total future context of the outer module can be split into the outer part (regulated with cache of the outer module) and inner part (regulated with inner submodules' caches). In some embodiments, only inner future context can be used in streaming. In other embodiments, partially inner future context and partially outer future context can be used in streaming.

**[0056]** FIG. 5 is a schematic 500 showing details of processing input frames during the training stage of submodules and modules of the pipeline 300, according to an example embodiment. FIG. 5 shows input frames and output frames for a minimal example of a neural network layer, which produces output shifted on the time axis parametrized by future context (also referred to as a shift). For example, the neural network layer may include conv1d, attention layer, conformer and other layers. During training, the output frames  $\hat{y}$  can be shifted for calculation of Loss sensitive to time location, which can teach the model (layer) to produce shifted output by the parameter of the future context. On inference stage (streaming) the input frames  $\hat{x}$  can be concatenated with previous context, divided in chunks and processed as described in FIG. 4.

**[0057]** FIG. 6 is a schematic showing details of summation of a context in an example module 600, according to an example embodiment. The module 600 may include parallel blocks, Conv1D 602 and Shift 604. The Conv1D 602 may use input frames 1, 2, 3 as context for input frames 4 and 5. To obtain the total future context for module 600, the input frames 1, 2, 3, 4, 5 can be shifted by shift 604 by 2 frames and summed with context output from the Conv1D 602 in block 606.

**[0058]** In some embodiments, the future context can be determined as a maximum of sums of context in any sequential path within the module, submodule or neural network. For example, the residual block module has a residual connection of a convolution layer with two sequential operations, where the first operation is convolution with future context  $\mathbf{x}$ , and the second operation is residual summation of inputs to convolution layer to output. There are two sequential paths from inputs to outputs in such a module, the first path: inputs→conv→add→output, and the second path: inputs→add→output. If the sequential path with the maximum sum of future contexts is the first path, then the total future context equals  $\mathbf{x}$ .

#### Technical Details

**[0059]** 1) In some embodiments, the speech audio signal 202 can include a continuous stream of 16-bit samples with a frequency of 22050 kHz. The speech audio signal 202 can be split into overlapping windows with a step of 256 samples (~11.6ms). Accordingly, one frame corresponds to 256 samples.

**[0060]** The acoustic features and linguistic features can be extracted and calculated such that the centers of the windows that correspond to each feature coincide. Thus, the centers can point to the same moment in time to satisfy the condition of alignment of the features. Accordingly, when the synthesis module 800 processes the input, the number of frames from each feature is the same. The number of frames in the output melspectrogram 204 may also coincide with the number of frames from each feature. Consequently, the number of samples of the speech audio signal 202 (input signal) can be equal to the number of samples of output audio signal 308.

**[0061]** 2) FIG. 7 shows a part of an example neural network 700 trained to generate accent-agnostic PPGs. The neural network 700 may include Conformer blocks 704 and Conformer block 702. The *Conformer* is a convolution-augmented transformer for speech recognition.

Each of the *Conformer* blocks can be implemented with restrictions on attention and the convolutional layer on visible future frames and previous frames. Neural network 700 trained to generate PPGs may also include a linear head for predicting phonemes.

**[0062]** The neural network 700 can be trained using an accent discriminator 706 and supervised information for accent. During training, additional feed-forward network (FFN) can be used between transformer blocks of neural network 700. Output features from FFN and supervised label on accent can be utilized for additional accent reduction loss L. Training with the additional accent reduction loss may reduce leak of accent through the recognition model. In example of FIG. 7, output of the fifth Conformer block 704 can be utilized to produce additional features by simple feed-forward network (for example linear-Rectified Linear Unit (ReLU)-linear). These features can be utilized for accent reduction loss based on data labels indicating which accent is used on every utterance. Use of the accent reduction loss during training may help to produce accent agnostic features). “Cross-entropy classification loss with reversal gradients module” for the accent reduction loss.

**[0063]** During inference, an output (target) accent can be selected from accents available on training stage. During the training stage, datasets of different voices and accents can be used. Any of the datasets can be validated for appropriate sound quality and then used for output target voice and accent.

**[0064]** 3) Extraction of acoustic features (pitch 206 (F0), energy 208, or VAD 212) can be performed by algorithmic methods using sound processing tools or by trained neural networks. The following algorithmic methods and utilities may be applied:

**[0065]** - Energy 208: Short-time Fourier transform (STFT) followed by a summation over all frequency bins and applying a logarithm to the result of the summation.

**[0066]** - Pitch 206 (F0) and VAD 212: values of F0 and voiced/unvoiced intervals can be obtained using the pyWORLD script. pyWORLD is a free software for high-quality speech analysis, manipulation and synthesis. The pyWORLD can estimate fundamental frequency (F0), aperiodicity, and spectral envelope. The values of F0 can be interpolated to unvoiced intervals. Then, the logarithm can be applied to resulting F0.

**[0067]** - Energy 208 and Pitch 206 (F0) can also be normalized globally using average variance of corresponding values obtained from voice signals recorded from multiple speakers.

**[0068]** FIG. 8 is a block diagram showing blocks of the synthesis module 800, according to an example embodiment. The synthesis module 800 may include an encoder 802 and decoder 804.

In some embodiments, encoder 802 and decoder 804 can be implemented as neural networks. Specifically, both encoder 802 and decoder 804 can be based on lightweight convolution blocks. A convolutional layer (Conv1d-Groupnorm-GELU) acting as relative positional embedding can be applied to input of the encoder 802. In some embodiments, relative positional embedding is added to the input inside the encoder 802. A further convolutional layer (Conv1d-Groupnorm-GELU) acting as further relative positional embedding can be applied to input of the decoder 804. In some embodiments, the further relative positional embedding is added to the input of the decoder 804.

**[0069]** The input of the encoder 802 are linguistic features 210. The output of the encoder 802 has hidden features 810. The speaker embedding 808 of a target speaker and embeddings of the discretized values of energy 208 and pitch 206 (f0) are further added to the output of the encoder 802 to form input for the decoder 804. If VAD 212 = False, a separate embedding is used instead of embedding of pitch 206 (F0). Speaker embedding 808 can be a calculated feature in the form of a dense multi-dimensional vector. Speaker embeddings 808 may include necessary information on target speakers' voice style not related to the accent of the target speaker.

**[0070]** In various embodiments, speaker embedding 808 can be trained fixed, pre-trained fixed, or extracted via a pre-trained model from speech audio signal 202 in real-time. For example, the speaker embedding 808 can be trained or extracted using pre-trained algorithms in such a way that the voice acoustic features corresponding to the speaker embedding 808 match voice acoustic features of the target speaker. In these embodiments, the speaker embedding 808 can be pretrained based on audio data including recorded speech of the target speaker. The user 102 may be provided with an option to select speaker embedding 808 from a list of pretrained speaker embeddings corresponding to different speakers.

**[0071]** In other embodiments, the voice speaker embedding 808 can be generated in real-time based on speech audio signal 202 being recorded from the voice of the user 102. In these embodiments, a caching scheme similar to the caching scheme described in FIG. 4 can be used to extract the speaker embedding 808 from speech audio signal 202 in real-time. The speaker embedding 808 can be used later to produce output audio signal 308 having voice acoustic features of the user 102.

**[0072]** In yet other embodiments, the speaker embedding 808 can be pre-generated based on previously recorded speech signals of the user 102 and stored in memory of the computing

device 106 or computing cloud 112. In these embodiments, the speaker embedding 808 can be retrieved from the memory computing device 106 or computing cloud 112 to avoid recomputing the speaker embedding 808 in real-time.

[0073] The output of decoder 804 is an intermediate melspectrogram 812. The intermediate melspectrogram 812 is used in a post-net module 806 to output melspectrogram 210. The post-net module 806 can be implemented as a small convolutional network. In some embodiments, the post-net module 806 can be similar to a post-net used in *Tacotron 2*. The values of VAD 212, Energy 208, and pitch 206 can be the same as acoustic features extracted by acoustic features extraction module 302 (shown in FIG. 3) or predicted by separate modules of the synthesis module 800. All blocks of encoder 802 and decoder 804, as well as predictors, the relative positional encoding layer, and the post-net module 806 can be implemented with a limited future context.

[0074] The output of the post-net module 806 is provided to vocoder 306. In some embodiments, the vocoder 306 can correspond to the HiFi-GAN v2 or LPCNet vocoder without changes. The vocoder parameters may correspond to the synthesis of the audio signal for the frames of the melspectrogram.

#### Data

[0075] - **For PPG.** Medium-quality voice data of various accents with the presence of texts are available in datasets of LibriSpeech and CommonVoice. The texts can be normalized and processed to obtain phoneme sequences according to ARPAbet phoneme set. Next, the procedure of alignment (align) of phonemes in time can be performed using the Montreal-Forced-Aligner utility. The image of texts can be processed by grapheme-to-phoneme (g2p) to obtain phonemes. Then, the phonemes can be processed and aligned together with audio signal.

[0076] - **For the vocoder.** The VCTK dataset is used for pre-training and, similarly to the data for synthesis, pure data from the same speakers that were not used to train the synthesis model. These data are resynthesized to melspectrograms. The melspectrograms can then be used together with the original pure audio to retrain the vocoder.

#### Training

**[0077]** In some embodiments, the PPG model is trained in two stages: pre-training and additional training. A set of augmentations, such as noise and SpecAugment can be used in both stages.

**[0078]** Pre-training of the PPG model can be performed in an unsupervised manner and using clustering. Specifically, Mel-frequency cepstral coefficients (Mfcc) or hidden features of large ASR neural networks can be algorithmically divided into clusters using k-means. Each frame can be assigned to a specific cluster (by a number). Pre-training includes training the PPG model with a classification head to obtain the number of the cluster for a frame. The last hidden layer of features of the PPG model can be clustered (like mfcc) and used for training an improved PPG model. This procedure can be applied iteratively.

**[0079]** Additional training of the PPG model is carried out on connectionist temporal classification loss (recognition task) by phoneme sequence and cross-entropy loss (classification task) by phoneme prediction in each frame. To do this, two appropriate heads can be used on top of the encoder in the PPG model. As described in FIG. 7, additional training of PPG model can be performed using loss for accent reduction. In these embodiments, the training can be performed by providing output of one of intermediate blocks of the PPG model to an accent discriminator with reversal gradient using accent classification loss function, which may play the role of accent loss function (see blocks 704 and 706 in FIG. 7).

**[0080]** The synthesis model can be trained on predictions of acoustic values in predictors of values of the output melspectrogram after the decoder and after the post-network. The predictors may include mean squared error (mse) loss according to energy and f0 predictions and binary cross entropy loss according to VAD prediction. For the synthesis model, output speaker embeddings can be trained as parameters which lead to a fixed number of available output speaker embeddings. In other embodiments, the output speaker embeddings can be obtained as hidden features of a pre-trained speaker classification model applied in streaming manner to input speech data in order to perceive input speaker voice.

**[0081]** Vocoder can be trained in two stages: training on a large multiple speaker dataset and additional training on resynthesis with the help of the already trained part of the pipeline 300. The optimization methods (training methods) can be combined to train described models jointly. During joint training, a single audio sample can be used for every loss function calculation and every parameter update.

Streaming

**[0082]** FIG. 9 is a schematic showing details of streaming of a speech audio signal, according to some example embodiment.

**[0083]** The speech audio signal can be processed in chunks. A chunk may correspond to a certain window, typically,  $3 \sim 10$  frames =  $3 * 256 \sim 10 * 256$  samples =  $35 \sim 116$  ms. Each module in pipeline 300 processes the chunk and outputs a result corresponding to the size of the input chunk.

**[0084]** In accordance with architectures of modules (feature extraction, synthesis, vocoding), an appropriate number of frames/samples can be cut off (modularly or at the output) to obtain a high-quality result with a low latency. The number of frames/samples can be defined as the total number of frames/samples from the front of the signal.

**[0085]** The streaming delay can be defined as the time difference between the original moment of speech and the output corresponding to the original one. The streaming delay includes the following components:

**[0086]** - Architectural delay. This delay is embedded in the indentation to account for a larger future context and thereby improving the processing quality of each module in the pipeline.

**[0087]** - The size of the chunk. The size of the chunk affects time for waiting for all the data before processing because the modules cannot output the result until the data are obtained by the modules.

**[0088]** - Processing time. The processing time is a time within which the chunk is completely processed by modules in the pipeline 300. The processing time needed to be adjusted to ensure a stable conversion of input chunks into output chunks.

**[0089]** In the example of FIG. 9, the size of the chunk is 200 ms, maximum processing time is 100 ms, and the architecture delay is 50 ms. The total delay is 350 ms. The chunks C1, C2, C3, ... are fed into the pipeline 300 in real time. Each output chunk C1', C2', ... correspond to only one of the input chunk C1, C2, C3, ... . portion 904 of output audio signal 308 corresponds to portion 902 of input speech audio signal 202. Portion 902 and portion 904 correspond to the same moment of the speech of the user 102. Overall, according to experiments conducted by the inventors, the methods of the present disclosure allow to achieve the total delay of 40-300ms.

**[0090]** FIG. 10 is a block diagram 1000 showing a digital signal processing module 1002 for use with pipeline 300 for real-time correction of accent in speech audio signals, according to some example embodiments. The digital signal processing module 1002 can be used for enhancement of speech audio signal 202 and output audio signal 308. The digital signal processing module 1002 may include submodule 1004 for collecting and storing statistics and context during processing speech audio signal 202. The processed speech audio signal 202 can be further provided to pipeline 300 for correction of accent. The output of the pipeline 300 can be processed by digital signal processing module 1002 to obtain an output audio signal 308. During processing the output of pipeline 300 the digital signal processing module 1002 can utilize statistics and context collected by submodule 1004 to restore some characteristics removed from the speech audio signal.

**[0091]** In some embodiments, digital signal processing module 1002 may process speech audio signal 202 to remove or attenuate noise, cancel echo, and remove other artifacts. Digital signal processing module 1002 may also perform normalization of loudness of the signal, equalizing the signal, applying a pre-emphasis or de-emphasis to the signal, and enhancing a speech in the signal. In certain embodiments, digital signal processing module 1002 can be integrated in one of the modules of the pipeline 300 as a beginning submodule or inserted between any two modules of the pipeline 300. In these embodiments, digital signal processing module 1002 can be trained with corresponding losses to imitate digital signal processing algorithms.

**[0092]** In some embodiments, digital signal processing module 1002 can be used to control loudness of output audio signal 308. For example, digital signal processing module 1002 may auto-gain loudness of speech audio signal 202 before pipeline 300 processing and then, based on a user setting, restore or not to restore level of loudness of output audio signal 308 to corresponding level of loudness of speech audio signal 202.

**[0093]** FIG. 11 is a flow chart showing a method 1100 for real-time correction of accent in speech audio signals, according to some example embodiments. In some embodiments, the operations of method 1100 may be combined, performed in parallel, or performed in a different order. The method 1100 may also include additional or fewer operations than those illustrated. The method 1100 may be performed by processing logic that comprises hardware (e.g., decision making logic, dedicated logic, programmable logic, and microcode), software

(such as software run on a general-purpose computer system or a dedicated machine), or a combination of both.

**[0094]** In block 1102, method 1100 may divide the speech audio signal into a stream of input chunks, an input chunk from the stream of input chunks including a pre-defined number of frames of the speech audio signal. The speech audio signal can be recorded, via an acoustic sensor, from the voice of a user by a computing device implementing method 1100.

**[0095]** In block 1104, method 1100 may extract, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features. The context may include a pre-determined number of the frames belonging to chunks preceding the input chunk in the stream of input chunks. The acoustic features may include a pitch of the speech audio signal, an energy of the speech audio signal, and a value of a voice activity detector. The voice activity detector may indicate absence of a human voice in the speech audio signal or presence of the human voice in the speech audio signal.

**[0096]** In block 1106, method 1100 may extract, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent or accent-agnostic linguistic features. The linguistic features extraction module may include a neural network trained based on audio data to output the linguistic features, neural network being trained using a loss function to reduce, in the linguistic features, contributions due to a further accent present in the audio data. The linguistic features may include one of the following: phonetic posteriorgrams or phonetic posteriorgrams with a data-driven phonetic library.

**[0097]** In block 1108, method 1100 may receive a speaker embedding for a human speaker. The speaker embedding can be pretrained based on audio data including a recorded speech of a target speaker having a further accent. Alternatively, the speaker embedding can be generated based on the speech audio signal in real-time.

**[0098]** In block 1110, method 1100 may generate an output chunk of an output audio signal based on the speaker embedding, the acoustic features, and the linguistic features. For example, method 1100 may provide the speaker embedding, the acoustic features, and the linguistic features to a synthesis module to generate a melspectrogram with the reduced accent. The synthesis module may include an encoder, a decoder, and a post-net module designed to improve the output of the decoder. Generating the melspectrogram may include processing the linguistic features by the encoder to generate hidden features; combining the hidden features,

the acoustic features, and the speaker embeddings to generate further features; processing the further features by the decoder and the post-net module to generate the melspectrogram.

**[0099]** After generating the melspectrogram, method 1100 may provide the melspectrogram to a vocoder to generate an output chunk of an output audio signal. A delay between the first timestamp corresponding to the time when the chunk of the speech audio signal is recorded and the second timestamp corresponding to the time when the output chunk is generated can be between 40 ms and 300 ms.

**[0100]** The acoustic features can be split into a stream of acoustic features chunks corresponding to the chunks in the stream of input chunks. The linguistic features can be split into a stream of linguistic features chunks corresponding to the chunks in the stream of input chunks. The melspectrogram can be split into a stream of melspectrogram chunks corresponding to the chunks in the stream of input chunks. A melspectrogram chunk of the stream of melspectrogram chunks is generated based on the following:

**[0101]** - an acoustic features chunk of the stream of acoustic features chunks and acoustic features context including the pre-determined number of acoustic features frames belonging to acoustic features chunks preceding the acoustic features chunk in the stream of acoustic features chunks; and

**[0102]** - a linguistic features chunk of the stream of melspectrogram chunks and linguistic features context including the pre-determined number of linguistic features frames belonging to linguistic features chunks preceding the linguistic features chunk in the stream of acoustic features chunks.

**[0103]** The method 1100 may include, prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust one or more characteristics of the speech audio signal to improve extraction of the linguistic features and the acoustic features.

**[0104]** The method 1100 may include, prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust a loudness of the speech audio signal from a first level to a second level. Method 1100 may include, after generating the output chunk of the output audio signal, processing the output chunk by the digital signal processing module, to adjust the loudness of the output audio signal to the first level.

**[0105]** FIG. 12 is a high-level block diagram illustrating an example computer system 1200, within which a set of instructions for causing the machine to perform any one or more of the

methodologies discussed herein can be executed. The computer system 1200 may include, refer to, or be an integral part of, one or more of a variety of types of devices, such as a general-purpose computer, a desktop computer, a laptop computer, a tablet computer, a netbook, a mobile phone, a smartphone, a personal digital computer, a smart television device, and a server, among others. In some embodiments, the computer system 1200 is an example of computing devices 106, computing device 110, and computing cloud 112 shown in FIG.

1. Notably, FIG. 12 illustrates just one example of the computer system 1200 and, in some embodiments, the computer system 1200 may have fewer elements/modules than shown in FIG. 12 or more elements/modules than shown in FIG. 12.

**[0106]** The computer system 1200 may include one or more processor(s) 1202, a memory 1204, one or more mass storage devices 1206, one or more input devices 1208, one or more output devices 1210, and a network interface 1212. The processor(s) 1202 are, in some examples, configured to implement functionality and/or process instructions for execution within the computer system 1200. For example, the processor(s) 1202 may process instructions stored in the memory 1204 and/or instructions stored on the mass storage devices 1206. Such instructions may include components of an operating system 1214 or software applications 1216. The computer system 1200 may also include one or more additional components not shown in FIG. 12, such as a body, a power supply, a power supply, a global positioning system (GPS) receiver, and so forth.

**[0107]** Memory 1204, according to one example, is configured to store information within the computer system 1200 during operation. The memory 1204, in some example embodiments, may refer to a non-transitory computer-readable storage medium or a computer-readable storage device. In some examples, memory 1204 is a temporary memory, meaning that a primary purpose of the memory 1204 may not be long-term storage. Memory 1204 may also refer to a volatile memory, meaning that memory 1204 does not maintain stored contents when the memory 1204 is not receiving power. Examples of volatile memories include random access memories (RAM), dynamic random access memories (DRAM), static random access memories (SRAM), and other forms of volatile memories known in the art. In some examples, memory 1204 is used to store program instructions for execution by the processor(s) 1202. The memory 1204, in one example, is used by software (e.g., the operating system 1214 or the software applications 1216). Generally, the software applications 1216 refer to software

Applications suitable for implementing at least some operations of the methods for real-time correction of accent in speech audio signals as described herein.

**[0108]** The mass storage devices 1206 may include one or more transitory or non-transitory computer-readable storage media and/or computer-readable storage devices. In some embodiments, the mass storage devices 1206 may be configured to store greater amounts of information than the memory 1204. The mass storage devices 1206 may further be configured for long-term storage of information. In some examples, the mass storage devices 1206 include non-volatile storage elements. Examples of such non-volatile storage elements include magnetic hard discs, optical discs, solid-state discs, flash memories, forms of electrically programmable memories (EPROM) or electrically erasable and programmable memories, and other forms of non-volatile memories known in the art.

**[0109]** Input devices 1208, in some examples, may be configured to receive input from a user through tactile, audio, video, or biometric channels. Examples of the input devices 1208 may include a keyboard, a keypad, a mouse, a trackball, a touchscreen, a touchpad, a microphone, one or more video cameras, image sensors, fingerprint sensors, or any other device capable of detecting an input from a user or other source, and relaying the input to the computer system 1200, or components thereof.

**[0110]** The output devices 1210, in some examples, may be configured to provide output to a user through visual or auditory channels. The output devices 1210 may include a video graphics adapter card, a liquid crystal display (LCD) monitor, a light emitting diode (LED) monitor, an organic LED monitor, a sound card, a speaker, a lighting device, a LED, a projector, or any other device capable of generating output that may be intelligible to a user. The output devices 1210 may also include a touchscreen, a presence-sensitive display, or other input/output capable displays known in the art.

**[0111]** The network interface 1212 of the computer system 1200, in some example embodiments, can be utilized to communicate with external devices via one or more data networks such as one or more wired, wireless, or optical networks including, for example, the Internet, intranet, LAN, WAN, cellular phone networks, Bluetooth radio, and an IEEE 902.11-based radio frequency network, Wi-Fi networks®, among others. The network interface 1212 may be a network interface card, such as an Ethernet card, an optical transceiver, a radio frequency transceiver, or any other type of device that can send and receive information.

**[0112]** The operating system 1214 may control one or more functionalities of the computer system 1200 and/or components thereof. For example, the operating system 1214 may interact with the software applications 1216 and may facilitate one or more interactions between the software applications 1216 and components of the computer system 1200. As shown in FIG. 12, the operating system 1214 may interact with or be otherwise coupled to the software applications 1216 and components thereof. In some embodiments, the software applications 1216 may be included in the operating system 1214. In these and other examples, virtual modules, firmware, or software may be part of software applications 1216.

**[0113]** Thus, systems and methods for real-time correction of accent in speech audio signals have been described. Although embodiments have been described with reference to specific example embodiments, it will be evident that various modifications and changes can be made to these example embodiments without departing from the broader spirit and scope of the present Application. Accordingly, the specification and drawings are to be regarded in an illustrative rather than a restrictive sense.

CLAIMS

What is claimed is:

1. A method for real-time correction of an accent in a speech audio signal, the method being implemented by a computing device and comprising:
  - dividing the speech audio signal into a stream of input chunks, an input chunk from the stream of input chunks including a pre-defined number of frames of the speech audio signal;
  - extracting, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features;
  - extracting, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent;
  - receiving a speaker embedding for a human speaker; and
  - generating an output chunk of an output audio signal based on the speaker embedding, the acoustic features, and the linguistic features.
2. The method for real-time correction of claim 1, wherein:
  - the speech audio signal is recorded from a voice of a user by the computing device via an acoustic sensor; and
  - a delay between a first timestamp and a second timestamp is between 40 milliseconds and 300 milliseconds, wherein the first timestamp corresponds to a time when the chunk of the speech audio signal is recorded and the second timestamp corresponds to a time when the output chunk is generated.
3. The method for real-time correction of claim 1, wherein the speaker embedding is generated based on the speech audio signal.
4. The method for real-time correction of claim 1, wherein the speaker embedding is pretrained based on audio data including a recorded speech of a target speaker having a further accent.
5. The method for real-time correction of claim 1, wherein the linguistic features include one of the following: phonetic posteriorgrams with a standardized phonetic dictionary and phonetic posteriorgrams with a data-driven phonetic library.
6. The method for real-time correction of claim 1, wherein the linguistic features extraction module includes a neural network trained based on audio data to output the linguistic features

with the reduced accent, the neural network being trained using a loss function to reduce, in the linguistic features, contributions due to a further accent present in the audio data.

7. The method for real-time correction of claim 1, wherein the acoustic features include a pitch of the speech audio signal, an energy of the speech audio signal, and a value of a voice activity detector, the voice activity detector indicating absence of a human voice in the speech audio signal or presence of the human voice in the speech audio signal.

8. The method for real-time correction of claim 1, wherein the context is a pre-determined number of the frames belonging to chunks preceding the input chunk in the stream of input chunks.

9. The method for real-time correction of claim 1, wherein the generating the output chunk includes:

- providing the speaker embedding, the acoustic features, and the linguistic features to a synthesis module to generate a melspectrogram with the reduced accent; and

- providing the melspectrogram to a vocoder to generate the output chunk of the output audio signal.

10. The method for real-time correction of claim 9, wherein:

- the synthesis module includes an encoder, a decoder, and a post-net module designed to improve an output of the decoder; and

- generating the melspectrogram includes:

- processing the linguistic features with the reduced accent by the encoder to generate hidden features;

- combining the hidden features, the acoustic features, and the speaker embeddings to generate further features;

- processing the further features by the decoder and the post-net module to generate the melspectrogram.

11. The method for real-time correction of claim 10, wherein:

- the acoustic features are split into a stream of acoustic features chunks corresponding to the chunks in the stream of input chunks;

- the linguistic features are split into a stream of linguistic features chunks corresponding to the chunks in the stream of input chunks;

the melspectrogram is split into a stream of melspectrogram chunks corresponding to the chunks in the stream of input chunks; and

a melspectrogram chunk of the stream of melspectrogram chunks is generated based on the following:

an acoustic features chunk of the stream of acoustic features chunks and acoustic features context including the pre-determined number of acoustic features frames belonging to acoustic features chunks preceding the acoustic features chunk in the stream of acoustic features chunks; and

a linguistic features chunk of the stream of melspectrogram chunks and linguistic features context including the pre-determined number of linguistic features frames belonging to linguistic features chunks preceding the linguistic features chunk in the stream of acoustic features chunks.

12. The method for real-time correction of claim 1, further comprising, prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust one or more characteristics of the speech audio signal to improve extraction of the linguistic features and the acoustic features.

13. The method for real-time correction of claim 1, further comprising:

prior to dividing the speech audio signal, processing the speech audio signal by a digital signal processing module to adjust a loudness of the speech audio signal from a first level to a second level;

after generating the output chunk of the output audio signal, processing the output chunk by the digital signal processing module, to adjust the loudness of the output audio signal to the first level.

14. A computing apparatus comprising:

a processor; and

a memory storing instructions that, when executed by the processor, configure the apparatus to:

divide a speech audio signal including an accent into a stream of input chunks, an input chunk from the stream of input chunks including a pre-defined number of frames of the speech audio signal;

extract, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features;

extract, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent;

receive a speaker embedding for a human speaker; and

generate an output chunk of an output audio signal based on the speaker embedding, the acoustic features, and the linguistic features.

15. The computing apparatus of claim 14, wherein:

the speech audio signal is recorded from a voice of a user by the computing apparatus via an acoustic sensor; and

a delay between a first timestamp and a second timestamp is between 40 milliseconds and 300 milliseconds, wherein the first timestamp corresponds to a time when the chunk of the speech audio signal is recorded and the second timestamp corresponds to a time when the output chunk is generated.

16. The computing apparatus of claim 14, wherein the speaker embedding is generated based on the speech audio signal.

17. The computing apparatus of claim 14, wherein the speaker embedding is pretrained based on audio data including a recorded speech of a target speaker having a further accent.

18. The computing apparatus of claim 14, wherein:

the linguistic features include one of the following: phonetic posteriorgrams with a standardized phonetic dictionary and phonetic posteriorgrams with a data-driven phonetic library; and

the acoustic features include a pitch of the speech audio signal, an energy of the speech audio signal, and a value of a voice activity detector, the voice activity detector indicating absence of a human voice in the speech audio signal or presence of the human voice in the speech audio signal.

19. The computing apparatus of claim 14, wherein the linguistic features extraction module includes a neural network trained based on audio data to output the linguistic features with the reduced accent, the neural network being trained using a loss function to reduce, in the linguistic features, contributions due to a further accent present in the audio data.

20. A non-transitory computer-readable storage medium, the computer-readable storage medium including instructions that when executed by a computer, cause the computer to:

- divide a speech audio signal including an accent into a stream of input chunks, an input chunk from the stream of input chunks including a pre-defined number of frames of the speech audio signal;

- extract, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features;

- extract, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent;

- receive a speaker embedding for a human speaker; and

- generate an output chunk of an output audio signal based on the speaker embedding, the acoustic features, and the linguistic features.

ABSTRACT

Systems and methods for real-time correction of an accent in a speech audio signal are provided. A method includes dividing the speech audio signal into a stream of input chunks, an input chunk from the stream of input chunks including a pre-defined number of frames of the speech audio signal, extracting, by an acoustic features extraction module from the input chunk and a context associated with the input chunk, acoustic features, the context is a pre-determined number of the frames preceding the input chunk in the stream; extracting, by a linguistic features extraction module from the input chunk and the context, linguistic features, receiving a speaker embedding for a human speaker, providing the speaker embedding, the acoustic features, and the linguistic features to a synthesis module to generate a melspectrogram with a reduced accent, providing the melspectrogram to a vocoder to generate an output chunk of an output audio signal.

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

|                       |                                                        |                                               |  |
|-----------------------|--------------------------------------------------------|-----------------------------------------------|--|
| First Named Inventor: | Andrei Golman                                          | Nonprovisional Application Number (if known): |  |
| Title of Invention:   | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |                                               |  |

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

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

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

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

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

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

|                                      |                                        |
|--------------------------------------|----------------------------------------|
| Signature /Georgiy Khayet/           | Date 2022-12-16                        |
| Name (Print/Typed) Georgiy L. Khayet | Practitioner Registration Number 59595 |

**Note:** This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.\*

☐ \*Total of \_\_\_\_\_ forms are submitted.

## Privacy Act Statement

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

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

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



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www.uspto.gov

| APPLICATION<br>NUMBER | FILING or<br>371(c) DATE | GRP ART<br>UNIT | FIL FEE REC'D | ATTY. DOCKET NO | TOT CLAIMS | IND CLAIMS |
|-----------------------|--------------------------|-----------------|---------------|-----------------|------------|------------|
| 18/083,727            | 12/19/2022               |                 | 830           | 1234.001US1     | 20         | 3          |

CONFIRMATION NO. 6895

85162  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

## FILING RECEIPT



0000000052529027

Date Mailed: 01/13/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

**Please verify the accuracy of the data presented on this receipt.** If an error is noted on this Filing Receipt, please submit a written request for a corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections provided that the request is grantable.

### Inventor(s)

Andrei Golman, San Francisco, CA;  
Dmitrii Sadykov, Yerevan, ARMENIA;

### Applicant(s)

Intone Inc., New York, NY;

**Power of Attorney:** None

### Domestic Priority data as claimed by applicant

This appln claims benefit of 63/297,901 01/10/2022

**Foreign Applications** for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

*Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.*

**Permission to Access Application via Priority Document Exchange:** Yes

**Permission to Access Search Results:** Yes

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

**If Required, Foreign Filing License Granted:** 01/10/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 18/083,727**

**Projected Publication Date:** 07/13/2023

**Non-Publication Request:** No

**Early Publication Request:** No

**\*\* SMALL ENTITY \*\***

**Title**

REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

**Preliminary Class**

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

## **PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

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

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

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

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

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

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

**GRANTED**

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

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

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

**NOT GRANTED**

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

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The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.

# PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number  
18/083,727

## APPLICATION AS FILED - PART I

| (Column 1)                                                                |                                                                                                                                                                                                                               | (Column 2)   | SMALL ENTITY |         | OR | OTHER THAN SMALL ENTITY |         |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|---------|----|-------------------------|---------|
| FOR                                                                       | NUMBER FILED                                                                                                                                                                                                                  | NUMBER EXTRA | RATE(\$)     | FEE(\$) |    | RATE(\$)                | FEE(\$) |
| BASIC FEE<br>(37 CFR 1.16(a), (b), or (c))                                | N/A                                                                                                                                                                                                                           | N/A          | N/A          | 80      |    | N/A                     |         |
| SEARCH FEE<br>(37 CFR 1.16(k), (l), or (m))                               | N/A                                                                                                                                                                                                                           | N/A          | N/A          | 350     |    | N/A                     |         |
| EXAMINATION FEE<br>(37 CFR 1.16(o), (p), or (q))                          | N/A                                                                                                                                                                                                                           | N/A          | N/A          | 400     |    | N/A                     |         |
| TOTAL CLAIMS<br>(37 CFR 1.16(i))                                          | 20 minus 20 =                                                                                                                                                                                                                 | *            | x            | = 0     | OR |                         |         |
| INDEPENDENT CLAIMS<br>(37 CFR 1.16(h))                                    | 3 minus 3 =                                                                                                                                                                                                                   | *            | x            | = 0     |    |                         |         |
| APPLICATION SIZE FEE<br>(37 CFR 1.16(s))                                  | If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s). |              |              | 0       |    |                         |         |
| MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))                         |                                                                                                                                                                                                                               |              |              | 0       |    |                         |         |
| * If the difference in column 1 is less than zero, enter "0" in column 2. |                                                                                                                                                                                                                               |              | TOTAL        | 830     |    | TOTAL                   |         |

## APPLICATION AS AMENDED - PART II

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

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

\* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

\*\*\* If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

IPR2026-00275



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| APPLICATION NO.        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 18/083,727             | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |
| 85162                  | 7590        | 02/15/2023           | EXAMINER            |                  |
| IP Jurists PC          |             |                      | CENTRAL, DOCKET     |                  |
| 100 Spectrum Center Dr |             |                      | ART UNIT            |                  |
| Suite 900              |             |                      | PAPER NUMBER        |                  |
| Irvine, CA 92618       |             |                      | OPAP                |                  |
|                        |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|                        |             |                      | 02/15/2023          | ELECTRONIC       |

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

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

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

ipjurists.pair@iphelpers.com

|                                                                               |                                              |                                      |                                 |
|-------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------|---------------------------------|
| <b><i>Decision Granting Request for Prioritized Examination (Track I)</i></b> | <b>Application No.</b><br>18/083,727         | <b>Applicant(s)</b><br>Golman et al. |                                 |
|                                                                               | <b>Examiner</b><br>CHERYL P GIBSON<br>BAYLOR | <b>Art Unit</b><br>OPET              | <b>AIA (FITF) Status</b><br>Yes |

1. THE REQUEST FILED 19 December 2022 IS **GRANTED** .

The above-identified application has met the requirements for prioritized examination

A. ☒ for an original nonprovisional application (Track I).

B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

A. filing a **petition for extension of time** to extend the time period for filing a reply;

B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;

C. filing a **request for continued examination** ;

D. filing a notice of appeal;

E. filing a request for suspension of action;

F. mailing of a notice of allowance;

G. mailing of a final Office action;

H. completion of examination as defined in 37 CFR 41.102; or

I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to CHERYL GIBSON BAYLOR at (571)272-3213. In his/her absence, calls may be directed to Petition Help Desk at (571) 272-3282.

|                                                      |  |
|------------------------------------------------------|--|
| /CHERYL GIBSON BAYLOR/<br>Paralegal Specialist, OPET |  |
|------------------------------------------------------|--|

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Irvine, CA 92618



**Courtesy Reminder for  
Application Serial No: 18/083,727**

Attorney Docket No: 1234.001US1

Customer Number: 85162

Date of Electronic Notification: 02/23/2023

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:

ipjurists.pair@iphelpers.com

To view your correspondence online or update your email addresses, please visit us anytime at **<https://ppair-my.uspto.gov/pair/PrivatePair>**.

If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov or call 1-866-217-9197.

IPR2026-00275

Krisp Technologies EX1002 Page 66

|                                                                                                                  |                                              |                                                                 |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>18/083,727 | <b>Applicant(s)/Patent Under Reexamination</b><br>Golman et al. |
|                                                                                                                  | <b>Examiner</b><br>VU B HANG                 | <b>Art Unit</b><br>2672                                         |

| CPC    |   |      |   |      |      |            |
|--------|---|------|---|------|------|------------|
| Symbol |   |      |   |      | Type | Version    |
| G10L   | / | 15   | / | 02   | F    | 2013-01-01 |
| G10L   | / | 13   | / | 04   | I    | 2013-01-01 |
| G10L   | / | 25   | / | 30   | I    | 2013-01-01 |
| G10L   | / | 15   | / | 22   | I    | 2013-01-01 |
| G10L   | / | 2015 | / | 025  | A    | 2013-01-01 |
| G10L   | / | 15   | / | 183  | A    | 2013-01-01 |
| G10L   | / | 13   | / | 08   | A    | 2013-01-01 |
| G10L   | / | 15   | / | 1822 | A    | 2013-01-01 |

| CPC Combination Sets |      |     |         |         |
|----------------------|------|-----|---------|---------|
| Symbol               | Type | Set | Ranking | Version |
| /                    |      |     |         |         |

|                                 |               |                              |                   |
|---------------------------------|---------------|------------------------------|-------------------|
| NONE                            |               | <b>Total Claims Allowed:</b> |                   |
| (Assistant Examiner)            | (Date)        | 20                           |                   |
| /VU B HANG/                     | 11 March 2023 | O.G. Print Claim(s)          | O.G. Print Figure |
| Primary Examiner, Art Unit 2672 | (Date)        | 1                            | 1                 |

|                                                                                                                  |                                              |                                                                 |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>18/083,727 | <b>Applicant(s)/Patent Under Reexamination</b><br>Golman et al. |
|                                                                                                                  | <b>Examiner</b><br>VU B HANG                 | <b>Art Unit</b><br>2672                                         |

|                                     |   |    |      |
|-------------------------------------|---|----|------|
| <b>INTERNATIONAL CLASSIFICATION</b> |   |    |      |
| <b>CLAIMED</b>                      |   |    |      |
| G10L                                | / | 15 | / 00 |
| <b>NON-CLAIMED</b>                  |   |    |      |
|                                     | / |    | /    |

|                                   |                 |
|-----------------------------------|-----------------|
| <b>US ORIGINAL CLASSIFICATION</b> |                 |
| <b>CLASS</b>                      | <b>SUBCLASS</b> |
| 704                               | 240             |

|                            |                                          |  |  |  |  |  |
|----------------------------|------------------------------------------|--|--|--|--|--|
| <b>CROSS REFERENCES(S)</b> |                                          |  |  |  |  |  |
| <b>CLASS</b>               | <b>SUBCLASS (ONE SUBCLASS PER BLOCK)</b> |  |  |  |  |  |
|                            |                                          |  |  |  |  |  |

|                                                |               |                              |                   |
|------------------------------------------------|---------------|------------------------------|-------------------|
| NONE                                           |               | <b>Total Claims Allowed:</b> |                   |
| (Assistant Examiner)                           | (Date)        | 20                           |                   |
| /VU B HANG/<br>Primary Examiner, Art Unit 2672 | 11 March 2023 | O.G. Print Claim(s)          | O.G. Print Figure |
| (Primary Examiner)                             | (Date)        | 1                            | 1                 |

|                                                                                                                  |                                              |                                                                 |
|------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| <b>Issue Classification</b><br> | <b>Application/Control No.</b><br>18/083,727 | <b>Applicant(s)/Patent Under Reexamination</b><br>Golman et al. |
|                                                                                                                  | <b>Examiner</b><br>VU B HANG                 | <b>Art Unit</b><br>2672                                         |

|                                                                                                                                                                                              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|--------------|-----------------|
| <input checked="" type="checkbox"/> Claims renumbered in the same order as presented by applicant <input type="checkbox"/> CPA <input type="checkbox"/> T.D. <input type="checkbox"/> R.1.47 |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
| <b>CLAIMS</b>                                                                                                                                                                                |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
| <b>Final</b>                                                                                                                                                                                 | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> | <b>Final</b> | <b>Original</b> |
|                                                                                                                                                                                              | 1               |              | 10              |              | 19              |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 2               |              | 11              |              | 20              |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 3               |              | 12              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 4               |              | 13              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 5               |              | 14              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 6               |              | 15              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 7               |              | 16              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 8               |              | 17              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |
|                                                                                                                                                                                              | 9               |              | 18              |              |                 |              |                 |              |                 |              |                 |              |                 |              |                 |

|                                                                                                 |  |                                    |                        |
|-------------------------------------------------------------------------------------------------|--|------------------------------------|------------------------|
| NONE<br><br>(Assistant Examiner) _____ (Date) _____                                             |  | <b>Total Claims Allowed:</b><br>20 |                        |
| /VU B HANG/<br>Primary Examiner, Art Unit 2672<br>(Primary Examiner) _____ (Date) 11 March 2023 |  | O.G. Print Claim(s)<br>1           | O.G. Print Figure<br>1 |

|                                                                                                          |                                              |                                                                 |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------|
| <b>Search Notes</b><br> | <b>Application/Control No.</b><br>18/083,727 | <b>Applicant(s)/Patent Under Reexamination</b><br>Golman et al. |
|                                                                                                          | <b>Examiner</b><br>VU B HANG                 | <b>Art Unit</b><br>2672                                         |

| CPC - Searched* |      |          |
|-----------------|------|----------|
| Symbol          | Date | Examiner |
|                 |      |          |

| CPC Combination Sets - Searched*                                                                                                          |            |          |
|-------------------------------------------------------------------------------------------------------------------------------------------|------------|----------|
| Symbol                                                                                                                                    | Date       | Examiner |
| G10L 15/07, 15/20, 15/22, 15/30, 15/02, 15/063, 15/08, 25/87, 15/14, 15/1815, 15/197, 15/1822, 15/183, 15/193, 15/19, 13/00, 13/06, 13/08 | 03/11/2023 | VH       |

| US Classification - Searched* |          |      |          |
|-------------------------------|----------|------|----------|
| Class                         | Subclass | Date | Examiner |
|                               |          |      |          |

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

| Search Notes                     |            |          |
|----------------------------------|------------|----------|
| Search Notes                     | Date       | Examiner |
| PE2E Search, Limited Text Search | 03/11/2023 | VH       |
| NPL Search - Dialog              | 03/11/2023 | VH       |
| Inventor Search                  | 03/11/2023 | VH       |

| Interference Search |                       |            |          |
|---------------------|-----------------------|------------|----------|
| US Class/CPC Symbol | US Subclass/CPC Group | Date       | Examiner |
| G10L                | 15/22                 | 03/11/2023 | VH       |

|                                                |  |
|------------------------------------------------|--|
| /VU B HANG/<br>Primary Examiner, Art Unit 2672 |  |
|------------------------------------------------|--|





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## BIB DATA SHEET

CONFIRMATION NO. 6895

|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          |                                                              |                                           |                           |                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------|-------------------------------------------|---------------------------|--------------------------------|
| <b>SERIAL NUMBER</b><br>18/083,727                                                                                                                                                                                                                                                                                                                                         | <b>FILING or 371(c) DATE</b><br>12/19/2022<br><b>RULE</b>                                                         | <b>CLASS</b><br>704                                      | <b>GROUP ART UNIT</b><br>2672                                | <b>ATTORNEY DOCKET NO.</b><br>1234.001US1 |                           |                                |
| <b>APPLICANTS</b><br>Intone Inc., New York, NY;<br><b>INVENTORS</b><br>Andrei Golman, San Francisco, CA;<br>Dmitrii Sadykov, Yerevan, ARMENIA;<br><b>** CONTINUING DATA *****</b><br>This appln claims benefit of 63/297,901 01/10/2022<br><b>** FOREIGN APPLICATIONS *****</b><br><b>** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY **</b><br>01/10/2023 |                                                                                                                   |                                                          |                                                              |                                           |                           |                                |
| Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Verified and /VU B HANG/<br>Acknowledged Examiner's Signature                                                                                                        |                                                                                                                   | <input type="checkbox"/> Met after Allowance<br>Initials | <b>STATE OR COUNTRY</b><br>CA                                | <b>SHEETS DRAWINGS</b><br>12              | <b>TOTAL CLAIMS</b><br>20 | <b>INDEPENDENT CLAIMS</b><br>3 |
| <b>ADDRESS</b><br>IP Jurists PC<br>100 Spectrum Center Dr<br>Suite 900<br>Irvine, CA 92618<br>UNITED STATES                                                                                                                                                                                                                                                                |                                                                                                                   |                                                          |                                                              |                                           |                           |                                |
| <b>TITLE</b><br>REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS                                                                                                                                                                                                                                                                                                     |                                                                                                                   |                                                          |                                                              |                                           |                           |                                |
| <b>FILING FEE RECEIVED</b><br>830                                                                                                                                                                                                                                                                                                                                          | FEES: Authority has been given in Paper<br>No. _____ to charge/credit DEPOSIT ACCOUNT<br>No. _____ for following: |                                                          | <input type="checkbox"/> All Fees                            |                                           |                           |                                |
|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          | <input type="checkbox"/> 1.16 Fees (Filing)                  |                                           |                           |                                |
|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          | <input type="checkbox"/> 1.17 Fees (Processing Ext. of time) |                                           |                           |                                |
|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          | <input type="checkbox"/> 1.18 Fees (Issue)                   |                                           |                           |                                |
|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          | <input type="checkbox"/> Other _____                         |                                           |                           |                                |
|                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                   |                                                          |                                                              | <input type="checkbox"/> Credit           |                           |                                |



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## **Search Strategy from Dialog**

March 11 2023 17:00

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## Search Strategy

**Databases:** Abstracts in New Technology & Engineering

| Set# | Searched for                                                                                                     | Results |
|------|------------------------------------------------------------------------------------------------------------------|---------|
| S1   | speech; divide; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding | 0°      |
| S2   | speech; split; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding  | 0°      |
| S3   | audio; split; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding   | 0°      |
| S4   | audio; divide; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding  | 0°      |
| S5   | audio; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding          | 0°      |
| S6   | speech; chunk; frame; extract; acoustic features; linguistic features; reduced accent; speaker embedding         | 0°      |
| S7   | speech; chunk; frame; acoustic features; linguistic features; reduced accent; speaker embedding                  | 0°      |
| S8   | audio; chunk; frame; acoustic features; linguistic features; reduced accent; speaker embedding                   | 0°      |
| S9   | audio; chunk; frame; acoustic features; linguistic features; accent; speaker embedding                           | 0°      |
| S10  | speech; chunk; frame; acoustic features; linguistic features; accent; speaker embedding                          | 0°      |
| S11  | speech; chunk; context; acoustic features; linguistic features; accent; speaker embedding                        | 0°      |
| S12  | audio; chunk; context; acoustic features; linguistic features; accent; speaker embedding                         | 0°      |
| S13  | audio; chunk; acoustic features; linguistic features; accent; speaker embedding                                  | 0°      |
| S14  | speech; chunk; acoustic features; linguistic features; accent; speaker embedding                                 | 0°      |
| S15  | speech; chunk; acoustic features; linguistic features; accent; speaker label                                     | 0°      |
| S16  | audio; chunk; acoustic features; linguistic features; accent; speaker label                                      | 0°      |
| S17  | audio; segment; acoustic features; linguistic features; accent; speaker embedding                                | 0°      |
| S18  | speech; segment; acoustic features; linguistic features; accent; speaker embedding                               | 0°      |
| S19  | speech; acoustic features; linguistic features; accent; speaker embedding                                        | 0°      |

|     |                                                                          |    |
|-----|--------------------------------------------------------------------------|----|
| S20 | audio; acoustic features; linguistic features; accent; speaker embedding | 0° |
| S21 | audio; acoustic features; linguistic features; accent; speaker label     | 3° |
| S22 | speech; acoustic features; linguistic features; accent; speaker label    | 3° |
| S23 | speech; acoustic model; linguistic model; accent; speaker label          | 3° |
| S24 | audio; acoustic model; linguistic model; accent; speaker label           | 3° |
| S25 | audio; acoustic model; linguistic model; accent; speaker embedding       | 0° |
| S26 | speech; acoustic model; linguistic model; accent; speaker embedding      | 0° |
| S27 | speech; acoustic model; linguistic model; accent; speaker label          | 3° |
| S28 | audio; acoustic model; linguistic model; accent; speaker label           | 3° |
| S29 | audio; features; acoustic; linguistic; accent; speaker label             | 3° |
| S30 | speech; features; acoustic; linguistic; accent; speaker label            | 3° |
| S31 | speech; features; acoustic; linguistic; accent; speaker embedding        | 0° |
| S32 | audio; features; acoustic; linguistic; accent; speaker embedding         | 0° |
| S33 | audio; acoustic; linguistic; accent; speaker label                       | 3° |
| S34 | speech; acoustic; linguistic; accent; speaker label                      | 3° |

° Duplicates are removed from the search and from the result count.

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# PE2E SEARCH - Search History (Prior Art)

| Ref # | Hits | Search Query     | DBs                                                                                                                                                                                                                                                                                                                  | Default Operator | Plurals | British Equivalents | Time Stamp          |
|-------|------|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|---------------------|---------------------|
| L1    | 974  | (G10L ADJ 15/07) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR               | ON      | ON                  | 2023/03/11 04:09 AM |
| L2    | 2290 | (G10L ADJ 15/20) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR               | ON      | ON                  | 2023/03/11 04:10 AM |
| L3    | 9900 | (G10L ADJ 15/22) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR               | ON      | ON                  | 2023/03/11 04:10 AM |
| L4    | 6207 | (G10L ADJ 15/26) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,                                                                                                                                                                                                                                        | OR               | ON      | ON                  | 2023/03/11 04:10 AM |

|    |      |                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |    |    |    |                        |
|----|------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
| L5 | 3245 | (G10L ADJ 15/30)  | CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)<br>(US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:10 AM |
| L6 | 2222 | (G10L ADJ 15/02)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                                                                                                                                                                            | OR | ON | ON | 2023/03/11<br>04:10 AM |
| L7 | 2915 | (G10L ADJ 15/063) | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                                                                                                                                                                            | OR | ON | ON | 2023/03/11<br>04:10 AM |

|     |      |                   |                                                                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
|-----|------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
| L8  | 2830 | (G10L ADJ 15/08)  | VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)<br>(US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:10 AM |
| L9  | 455  | (G10L ADJ 25/87)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                 | OR | ON | ON | 2023/03/11<br>04:10 AM |
| L10 | 584  | (G10L ADJ 15/14)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                 | OR | ON | ON | 2023/03/11<br>04:11 AM |
| L11 | 780  | (G10L ADJ 15/197) | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,                                                                                                                                                                                                                                                                          | OR | ON | ON | 2023/03/11<br>04:11 AM |

|     |      |                    |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L12 | 2181 | (G10L ADJ 15/1815) | HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                           | OR | ON | ON | 2023/03/11 04:11 AM |
| L13 | 2193 | (G10L ADJ 15/1822) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:11 AM |
| L14 | 1362 | (G10L ADJ 15/183)  | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:11 AM |

|     |      |                   |                                                                                                                                                                                                                                                                                                                                                                               |    |    |    |                        |
|-----|------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
| L15 | 515  | (G10L ADJ 15/193) | IBM_TDB)<br>(US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:11 AM |
| L16 | 794  | (G10L ADJ 15/19)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)             | OR | ON | ON | 2023/03/11<br>04:11 AM |
| L17 | 2289 | (G10L ADJ 13/00)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)             | OR | ON | ON | 2023/03/11<br>04:12 AM |
| L18 | 403  | (G10L ADJ 13/06)  | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,                                                                                                                                                                                | OR | ON | ON | 2023/03/11<br>04:12 AM |

|     |       |                                                                                                                            |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|-------|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L19 | 1432  | (G10L ADJ 13/08)                                                                                                           | MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                           | OR | ON | ON | 2023/03/11 04:12 AM |
| L20 | 20665 | (L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L19) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:13 AM |
| L21 | 763   | golman.in.                                                                                                                 | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:14 AM |
| L22 | 3186  | sadykov.in.                                                                                                                | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:15 AM |

|     |      |                                                                              |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |      |                                                                              | USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)                   |    |    |    | 04:14 AM            |
| L23 | 3949 | (L21 OR L22)                                                                 | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:14 AM |
| L24 | 192  | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1))               | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:15 AM |
| L25 | 73   | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME frame\$1) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,                                                                                                    | OR | ON | ON | 2023/03/11 04:16 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |    |    |    |                        |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
| L26 | 7 | L20 AND ((divid\$3<br>near4 audio) SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(context OR<br>(predetrmined near3<br>frame\$1)))                                                                                                                                                                                                                                                                                                                 | NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)<br><br>(US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:16 AM |
| L27 | 0 | L20 AND ((divid\$3<br>near4 audio) SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(context OR<br>(predetrmined near3<br>frame\$1)) SAME<br>(extract\$3 near5<br>(acoustic ADJ<br>feature\$1)) SAME<br>(extract\$3 near5<br>(linguistic ADJ<br>feature\$1)) SAME<br>((reduced OR removed)<br>near3 accent) OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label))<br>SAME (generat\$3<br>near5 (output ADJ<br>(chunk OR segment)))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                          | OR | ON | ON | 2023/03/11<br>04:24 AM |
| L28 | 0 | L20 AND ((divid\$3<br>near4 audio) SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(context OR<br>(predetrmined near3<br>frame\$1)) SAME<br>(extract\$3 near5<br>(acoustic ADJ<br>feature\$1)) SAME<br>(extract\$3 near5<br>(linguistic ADJ<br>feature\$1)) SAME<br>((reduced OR removed)                                                                                                                                                            | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;                                                                                                                                                       | OR | ON | ON | 2023/03/11<br>04:25 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L29 | 0 | near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) ADJ (chunk OR segment)))                                                                                                                                                                                                                                                  | JPO; DERWENT; IBM_TDB)                                                                                                                                                                                                                                                                                               | OR | ON | ON | 2023/03/11 04:25 AM |
| L30 | 0 | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR (predetermined near3 frame\$1)) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment))) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:25 AM |
| L31 | 0 | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment)))                       | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:25 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment)))                                                                                                                                      | MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                           |    |    |    |                     |
| L32 | 0 | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment)))            | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:26 AM |
| L33 | 0 | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified OR correct) near3(chunk OR segment))) | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:26 AM |
| L34 | 0 | L20 AND ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ                                                                                                                                                                                     | (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,                                                                                                                        | OR | ON | ON | 2023/03/11 04:27 AM |

|     |   |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
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| L35 | 0 | feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label)))                                                                                                                                                                                      | MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                                                                                                                          | OR | ON | ON | 2023/03/11<br>04:27 AM |
| L36 | 0 | L20 AND ((divid\$3<br>near4 audio) SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(reduced OR removed)<br>SAME accent OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:28 AM |
| L37 | 0 | L20 AND ((chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(((reduced OR<br>removed) near4 accent)<br>OR (accent-agnostic))<br>SAME (speaker near3<br>(embedding OR label)))                              | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:28 AM |
| L38 | 0 | L20 AND (audio SAME<br>(chunk\$1 OR                                                                                                                                                                                                                                                                                      | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,                                                                                                                                                                                                                                                                                                                          | OR | ON | ON | 2023/03/11<br>04:28 AM |

|     |   |                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
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|     |   | segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(((reduced OR<br>removed) near4 accent)<br>OR (accent-agnostic))<br>SAME (speaker near3<br>(embedding OR label)))                     | AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                             |    |    |    |                        |
| L39 | 0 | L20 AND (audio SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME (acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(((reduced OR<br>removed) near4 accent)<br>OR (accent-agnostic))<br>SAME (speaker near3<br>(embedding OR label))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:28 AM |
| L40 | 0 | L20 AND (audio SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(((reduced OR<br>removed) near4 accent)<br>OR (accent-agnostic))<br>SAME (speaker near3<br>(embedding OR label)))                               | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:29 AM |
| L41 | 0 | L20 AND (audio SAME<br>(chunk\$1 OR<br>segment\$1) SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(((reduced OR<br>removed) near3 accent)<br>OR (accent-agnostic))<br>SAME (speaker near3<br>(embedding OR label)))                               | (US-PGPUB; USPAT;<br>USOCR; FIT (AU, AP,<br>AT, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, OA, RU, SU, WO,<br>MC, MD, MY, NL, NO,<br>NZ, PH, PL, PT, RO,<br>RS, SE, SG, SI, SK,<br>TH, TN, TR, TW, UA,<br>VN); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:29 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
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|     |   | (embedding OR label)))                                                                                                                                                                                                                                                                                                                                                       | RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                                                                                       |    |    |    |                     |
| L42 | 0 | ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR (predetrmined near3 frame\$1)) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME (generat\$3 near5 (output ADJ (chunk OR segment)))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:29 AM |
| L43 | 0 | ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR (predetrmined near3 frame\$1)) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) ADJ (chunk OR segment))))     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:29 AM |
| L44 | 0 | ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR (predetrmined near3 frame\$1)) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME                                                                                                                                                             | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,                                                            | OR | ON | ON | 2023/03/11 04:29 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L45 | 0 | ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment)))                                                                                                                                                                                                                   | TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                                                                                                           | OR | ON | ON | 2023/03/11 04:29 AM |
| L46 | 0 | ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR (predetermined near3 frame\$1)) SAME (extract\$3 near5 (acoustic ADJ feature\$1)) SAME (extract\$3 near5 (linguistic ADJ feature\$1)) SAME ((reduced OR removed) near3 accent) OR (accent-agnostic) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3(chunk OR segment))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:30 AM |
| L47 | 0 | ((divid\$3 near4 audio) SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) OR                                                                                                                                                              | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE,                                                                                | OR | ON | ON | 2023/03/11 04:30 AM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
|-----|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
| L48 | 0 | (accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label))<br>SAME ((output OR<br>modified) near3(chunk<br>OR segment)))                                                                                                                                                                                                                                                             | SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                                                                                                                                                                        | OR | ON | ON | 2023/03/11<br>04:30 AM |
| L49 | 0 | ((divid\$3 near4 audio)<br>SAME (chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label))<br>SAME ((output OR<br>modified OR correct)<br>near3(chunk OR<br>segment))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:30 AM |
| L50 | 0 | ((divid\$3 near4 audio)<br>SAME (chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label)))                                                                            | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:30 AM |
| L51 | 0 | ((divid\$3 near4 audio)<br>SAME (chunk\$1 OR<br>segment\$1) SAME<br>(context OR frame\$1)<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(reduced OR removed)<br>SAME accent OR<br>(accent-agnostic)<br>SAME (speaker near3<br>(embedding OR label)))                                                                               | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11             |

|     |   |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near4 accent) OR (accent-agnostic)) SAME (speaker near3 (embedding OR label)))        | USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                   |    |    |    | 04:30 AM            |
| L52 | 0 | ((chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near4 accent) OR (accent-agnostic)) SAME (speaker near3 (embedding OR label)))            | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:30 AM |
| L53 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near4 accent) OR (accent-agnostic)) SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:31 AM |
| L54 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (context OR frame\$1) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near4 accent) OR (accent-agnostic))                                                            | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,                                                                                                    | OR | ON | ON | 2023/03/11 04:31 AM |

|     |   |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | SAME (speaker near3 (embedding OR label)))                                                                                                                                                                      | PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                                                                   |    |    |    |                     |
| L55 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near4 accent) OR (accent-agnostic)) SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:31 AM |
| L56 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (((reduced OR removed) near3 accent) OR (accent-agnostic)) SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:31 AM |
| L57 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) SAME accent OR (accent-agnostic)) SAME (speaker near3 (embedding OR label)))    | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:31 AM |
| L58 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME (acoustic ADJ                                                                                                                                                         | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,                                                                                                                                                                                                                                                            | OR | ON | ON | 2023/03/11 04:32 AM |

|     |    |                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |    | feature\$1) SAME (linguistic ADJ feature\$1) SAME (accent OR accent-agnostic) SAME (speaker near3 (embedding OR label)))                                                         | CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                           |    |    |    |                     |
| L59 | 0  | (audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (accent OR accent-agnostic) SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:33 AM |
| L60 | 22 | (audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (speaker near3 (embedding OR label)))                                  | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:33 AM |
| L61 | 6  | L20 AND (audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (speaker near3 (embedding OR label)))                          | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,                                                            | OR | ON | ON | 2023/03/11 04:33 AM |

|     |   |                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                    |    |    |    |                     |
|-----|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L62 | 0 | L20 AND (audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (speaker near3 (embedding OR label)) SAME accent) | TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)<br>(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:33 AM |
| L63 | 0 | (audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (speaker near3 (embedding OR label)) SAME accent)         | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                               | OR | ON | ON | 2023/03/11 04:34 AM |
| L64 | 3 | (audio SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (accent OR accent-agnostic) SAME (speaker near3 (embedding OR label))))                 | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                               | OR | ON | ON | 2023/03/11 04:34 AM |
| L65 | 0 | L20 AND (audio SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME                                                                                 | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,                                                                                                                                                                                                                                                                                  | OR | ON | ON | 2023/03/11 04:34 AM |

|     |   |                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | (accent OR accent-agnostic) SAME (speaker near3 (embedding OR label)))                                                                                                                                                                                                            | EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                   |    |    |    |                     |
| L66 | 0 | L23 AND (L60 OR L61 OR L64)                                                                                                                                                                                                                                                       | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:11 PM |
| L67 | 0 | L3 AND ((audio SAME (chunk\$1 OR segment\$1) SAME ((acoustic ADJ feature\$1) OR (linguistic ADJ feature\$1)) SAME (speaker near3 (embedding OR label))).clm.)                                                                                                                     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:11 PM |
| L68 | 0 | L20 AND (((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;                        | OR | ON | ON | 2023/03/11 04:30 PM |

|     |   |                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                |    |    |    |                     |
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| L69 | 0 | SAME ((output OR modified) near3 chunk OR segment)))<br>L20 AND ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3 (chunk OR segment))) | JPO; DERWENT; IBM_TDB)<br>(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:31 PM |
| L70 | 0 | L20 AND ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME (accent near4 correct\$3))                                                                               | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                           | OR | ON | ON | 2023/03/11 04:31 PM |
| L71 | 0 | L20 AND ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME correct\$3)                                                                                              | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                           | OR | ON | ON | 2023/03/11 04:32 PM |
| L72 | 0 | L20 AND ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME                                                                                                                                                                                                                                                                                          | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,                                                                                                                                                                                                                                              | OR | ON | ON | 2023/03/11 04:32 PM |

|     |   |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
|-----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
|     |   | context SAME extract\$3<br>SAME (acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) SAME<br>(speaker near3<br>(embedding OR label)))                                                                                           | EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                  |    |    |    |                        |
| L73 | 0 | L20 AND ((divid\$3 OR<br>split\$4) SAME (chunk\$1<br>OR segment) SAME<br>frame\$1 SAME context<br>SAME extract\$3 SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) SAME<br>(speaker near3<br>(embedding OR label))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:32 PM |
| L74 | 0 | L20 AND ((divid\$3 OR<br>split\$4) SAME (chunk\$1<br>OR segment) SAME<br>frame\$1 SAME context<br>SAME (acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) SAME<br>(speaker near3<br>(embedding OR label)))                    | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:32 PM |
| L75 | 0 | L20 AND ((divid\$3 OR<br>split\$4) SAME (chunk\$1<br>OR segment) SAME<br>(frame\$1 OR context)<br>SAME (acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) SAME<br>(speaker near3<br>(embedding OR label)))                    | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:32 PM |

|     |   |                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                |    |    |    |                     |
|-----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L76 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)))) | JPO; DERWENT; IBM_TDB)<br>(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:33 PM |
| L77 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME (reduced OR removed) SAME accent SAME (speaker near3 (embedding OR label))))    | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                           | OR | ON | ON | 2023/03/11 04:33 PM |
| L78 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME accent SAME (speaker near3 (embedding OR label))))                              | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                           | OR | ON | ON | 2023/03/11 04:33 PM |
| L79 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME feature\$1 SAME (acoustic ADJ model) SAME (linguistic ADJ model) SAME accent                                                                    | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,                                                                                                                                                                                              | OR | ON | ON | 2023/03/11 04:34 PM |

|     |   |                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | SAME (speaker near3 (embedding OR label)))                                                                                                                     | IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                   |    |    |    |                     |
| L80 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME feature\$1 SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:35 PM |
| L81 | 0 | L20 AND ((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label)))     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:35 PM |
| L82 | 0 | L20 AND ((speech OR audio) SAME (chunk\$1 OR segment) SAME ame acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label)))                 | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:36 PM |

|     |   |                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-----------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L83 | 0 | L20 AND ((chunk\$1 OR segment) SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label))))                                | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:36 PM |
| L84 | 0 | L20 AND ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME feature\$1 SAME acoustic SAME linguistic SAME (speaker near3 (embedding OR label)))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:37 PM |
| L85 | 1 | L20 AND ((chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (speaker near3 (embedding OR label))))                            | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:37 PM |
| L86 | 1 | L20 AND ((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (speaker near3 (embedding OR label))))     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,                                                                                                                        | OR | ON | ON | 2023/03/11 04:37 PM |

|     |   |                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   |                                                                                                                                                                                                                                                                                                                               | NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                                               |    |    |    |                     |
| L87 | 0 | ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME ((output OR modified) near3 (chunk OR segment))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:40 PM |
| L88 | 0 | ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME (accent near4 correct\$3))                       | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:41 PM |
| L89 | 0 | ((audio OR speech) SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)) SAME correct\$3)                                      | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:41 PM |
| L90 | 0 | ((audio OR speech)                                                                                                                                                                                                                                                                                                            | (US-PGPUB; USPAT;                                                                                                                                                                                                                                                                                                    | OR | ON | ON | 2023/03/11          |

|     |   |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|-----|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|     |   | SAME (divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label))) | USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                   |    |    |    | 04:41 PM            |
| L91 | 0 | ((divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME extract\$3 SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)))     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:41 PM |
| L92 | 0 | ((divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME frame\$1 SAME context SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME (speaker near3 (embedding OR label)))                     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:41 PM |
| L93 | 0 | ((divid\$3 OR split\$4) SAME (chunk\$1 OR segment) SAME (frame\$1 OR context) SAME (acoustic ADJ feature\$1) SAME (linguistic ADJ feature\$1) SAME ((reduced OR removed) near3 accent) SAME                                                           | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,                                                                                                    | OR | ON | ON | 2023/03/11 04:41 PM |

|     |   |                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
|-----|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
|     |   | (speaker near3<br>(embedding OR label)))                                                                                                                                                                                           | PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                                                                                                                                                                                 |    |    |    |                        |
| L94 | 0 | ((chunk\$1 OR segment<br>SAME (frame\$1 OR<br>context) SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>((reduced OR removed)<br>near3 accent) SAME<br>(speaker near3<br>(embedding OR label))) | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:42 PM |
| L95 | 0 | ((chunk\$1 OR segment<br>SAME (frame\$1 OR<br>context) SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>(reduced OR removed)<br>SAME accent SAME<br>(speaker near3<br>(embedding OR label)))    | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:42 PM |
| L96 | 0 | ((chunk\$1 OR segment<br>SAME (frame\$1 OR<br>context) SAME<br>(acoustic ADJ<br>feature\$1) SAME<br>(linguistic ADJ<br>feature\$1) SAME<br>accent SAME (speaker<br>near3 (embedding OR<br>label)))                                 | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:42 PM |
| L97 | 0 | ((chunk\$1 OR segment<br>SAME (frame\$1 OR<br>context) SAME                                                                                                                                                                        | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,                                                                                                                                                                                                                                                                                                   | OR | ON | ON | 2023/03/11<br>04:42 PM |

|      |    |                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|      |    | feature\$1 SAME (acoustic ADJ model) SAME (linguistic ADJ model) SAME accent SAME (speaker near3 (embedding OR label)))                                | CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                           |    |    |    |                     |
| L98  | 0  | ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME feature\$1 SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:42 PM |
| L99  | 0  | ((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label)))     | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:42 PM |
| L100 | 72 | ((speech OR audio) SAME (chunk\$1 OR segment) SAME ame acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label)))                 | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,                                                            | OR | ON | ON | 2023/03/11 04:42 PM |

|      |   |                                                                                                                                            |                                                                                                                                                                                                                                                                                                                      |    |    |    |                     |
|------|---|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
|      |   |                                                                                                                                            | TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                                                                                                                                                                                                                                           |    |    |    |                     |
| L101 | 0 | ((chunk\$1 OR segment) SAME acoustic SAME linguistic SAME accent SAME (speaker near3 (embedding OR label)))                                | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:43 PM |
| L102 | 0 | ((chunk\$1 OR segment) SAME (frame\$1 OR context) SAME feature\$1 SAME acoustic SAME linguistic SAME (speaker near3 (embedding OR label))) | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:43 PM |
| L103 | 2 | ((chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (speaker near3 (embedding OR label)))                            | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:43 PM |
| L104 | 2 | ((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME                                                                         | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU,                                                                                                                                                                                                                                        | OR | ON | ON | 2023/03/11 04:43 PM |

|      |   |                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                   |    |    |    |                        |
|------|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|------------------------|
|      |   | acoustic SAME<br>linguistic SAME<br>(speaker near3<br>(embedding OR label)))                                                                                              | CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB)                                                                                           |    |    |    |                        |
| L105 | 1 | L20 AND (L85 OR L86<br>OR L100)                                                                                                                                           | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:44 PM |
| L106 | 1 | L20 AND (L103 OR<br>L104)                                                                                                                                                 | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:45 PM |
| L107 | 0 | L3 AND (((speech OR<br>audio) SAME (chunk\$1<br>OR segment) SAME<br>ame acoustic SAME<br>linguistic SAME accent<br>SAME (speaker near3<br>(embedding OR<br>label))).clm.) | (US-PGPUB; USPAT;<br>USOCR; FIT (AP, AT,<br>AU, BE, BG, BR, BY,<br>CA, CH, CN, CS, CU,<br>CZ, DD, DE, DK, EA,<br>EE, EP, ES, FI, FR, GB,<br>HR, HU, ID, IE, IL, IS,<br>IT, JP, KR, LT, LU, LV,<br>MA, MC, MD, MY, NL,<br>NO, NZ, OA, PH, PL,<br>PT, RO, RS, RU, SE,<br>SG, SI, SK, SU, TH,<br>TN, TR, TW, UA, VN,<br>WO); FPRS; EPO;<br>JPO; DERWENT;<br>IBM_TDB) | OR | ON | ON | 2023/03/11<br>04:46 PM |

|      |   |                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                |    |    |    |                     |
|------|---|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L108 | 0 | L20 AND (((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (embedding OR label) SAME accent)) | WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)<br>(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:46 PM |
| L109 | 5 | L20 AND ((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (embedding OR label))               | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                           | OR | ON | ON | 2023/03/11 04:47 PM |
| L110 | 8 | (((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (embedding OR label) SAME accent))         | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)                                           | OR | ON | ON | 2023/03/11 04:47 PM |
| L111 | 5 | L20 AND (L109 OR L110)                                                                                                                       | (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,                                                                                                                                                                                                                                      | OR | ON | ON | 2023/03/11 04:48 PM |

|      |   |                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |    |    |    |                     |
|------|---|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|
| L112 | 0 | L3 AND (((speech OR audio) SAME (chunk\$1 OR segment) SAME feature\$1 SAME acoustic SAME linguistic SAME (embedding OR label) SAME accent)).clm.) | HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)<br>(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB) | OR | ON | ON | 2023/03/11 04:48 PM |
|------|---|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|---------------------|

## PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
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## NOTICE OF ALLOWANCE AND FEE(S) DUE

85162 7590 03/15/2023  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

EXAMINER

HANG, VU B

ART UNIT

PAPER NUMBER

2672

DATE MAILED: 03/15/2023

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 18/083,727      | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |

TITLE OF INVENTION: REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

| APPLN. TYPE    | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|---------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | SMALL         | \$480         | \$0.00              | \$0.00               | \$480            | 06/15/2023 |

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

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

### HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

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

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.

85162 7590 03/15/2023  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

## 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. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 18/083,727      | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |

TITLE OF INVENTION: REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

| APPLN. TYPE    | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|---------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | SMALL         | \$480         | \$0.00              | \$0.00               | \$480            | 06/15/2023 |

| EXAMINER   | ART UNIT | CLASS-SUBCLASS |
|------------|----------|----------------|
| HANG, VU B | 2672     | 704-240000     |

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

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

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

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

1 \_\_\_\_\_

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

2 \_\_\_\_\_

3 \_\_\_\_\_

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

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

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

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

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

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

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

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

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

☐ Applicant certifying micro entity status. See 37 CFR 1.29

☐ Applicant asserting small entity status. See 37 CFR 1.27

☐ Applicant changing to regular undiscounted fee status.

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

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

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

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

Authorized Signature \_\_\_\_\_

Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_

Registration No. \_\_\_\_\_



# UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NO.                                                          | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 18/083,727                                                               | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |
| 85162                                                                    | 7590        | 03/15/2023           | EXAMINER            |                  |
| IP Jurists PC<br>100 Spectrum Center Dr<br>Suite 900<br>Irvine, CA 92618 |             |                      | HANG, VU B          |                  |
|                                                                          |             |                      | ART UNIT            | PAPER NUMBER     |
|                                                                          |             |                      | 2672                |                  |
| DATE MAILED: 03/15/2023                                                  |             |                      |                     |                  |

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

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

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

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

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

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

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

### Privacy Act Statement

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

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

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

|                               |                                      |                                      |                                 |
|-------------------------------|--------------------------------------|--------------------------------------|---------------------------------|
| <b>Notice of Allowability</b> | <b>Application No.</b><br>18/083,727 | <b>Applicant(s)</b><br>Golman et al. |                                 |
|                               | <b>Examiner</b><br>VU B HANG         | <b>Art Unit</b><br>2672              | <b>AIA (FITF) Status</b><br>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 12/19/2022.  
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on \_\_\_\_.

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

3. ☒ The allowed claim(s) is/are 1-20. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see [http://www.uspto.gov/patents/init\\_events/pph/index.jsp](http://www.uspto.gov/patents/init_events/pph/index.jsp) or send an inquiry to [PPHfeedback@uspto.gov](mailto: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. <input type="checkbox"/> Notice of References Cited (PTO-892)                                                 | 5. <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 2. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date ____.          | 6. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material ____. | 7. <input type="checkbox"/> Other ____.                                              |
| 4. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date ____.                            |                                                                                      |

|                                                |  |
|------------------------------------------------|--|
| /VU B HANG/<br>Primary Examiner, Art Unit 2672 |  |
|------------------------------------------------|--|

***Notice of Pre-AIA or AIA Status***

- The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.
- This office action is responsive to the application filed on 12/19/2022.
- Claims 1-20 are allowed.

***Allowable Subject Matter***

Claims 1-20 are allowed.

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

The prior art of record does not teach, disclose or suggest the claimed limitation of (in combination with all other limitations in the claim) "extracting, by a linguistic features extraction module from the input chunk and the context, linguistic features with a reduced accent", as found in **Claim 1**. Similar features are claimed in **Claims 2-20**.

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

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VU B HANG whose telephone number is (571)272-0582.

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

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour, can be reached at (571)272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/VU B HANG/  
Primary Examiner, Art Unit 2672

# 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)

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.

85162 7590 03/15/2023  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

## 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.

|                   |                         |
|-------------------|-------------------------|
| Georgiy L. Khayet | (Typed or printed name) |
| /Georgiy Khayet/  | (Signature)             |
| June 14, 2023     | (Date)                  |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 18/083,727      | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |

TITLE OF INVENTION: REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

| APPLN. TYPE    | ENTITY STATUS | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|---------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | SMALL         | \$480         | \$0.00              | \$0.00               | \$480            | 06/15/2023 |

| EXAMINER   | ART UNIT | CLASS-SUBCLASS |
|------------|----------|----------------|
| HANG, VU B | 2672     | 704-240000     |

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

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

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

2. For printing on the patent front page, list

(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,

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

1 Georgiy L. Khayet

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)

Intone Inc.

New York, NY

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 /Georgiy Khayet/

Date June 14, 2023

Typed or printed name Georgiy L. Khayet

Registration No. 59595

| Electronic Patent Application Fee Transmittal |          |                                                        |        |                      |
|-----------------------------------------------|----------|--------------------------------------------------------|--------|----------------------|
| Application Number:                           |          | 18083727                                               |        |                      |
| Filing Date:                                  |          | 19-Dec-2022                                            |        |                      |
| Title of Invention:                           |          | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |        |                      |
| First Named Inventor/Applicant Name:          |          | Andrei Golman                                          |        |                      |
| Filer:                                        |          | Georgiy L. Khayet/Irina Klimova                        |        |                      |
| Attorney Docket Number:                       |          | 1234.001US1                                            |        |                      |
| Filed as Small Entity                         |          |                                                        |        |                      |
| Filing Fees for Utility under 35 USC 111(a)   |          |                                                        |        |                      |
| Description                                   | Fee Code | Quantity                                               | Amount | Sub-Total in USD(\$) |
| Basic Filing:                                 |          |                                                        |        |                      |
| Pages:                                        |          |                                                        |        |                      |
| Claims:                                       |          |                                                        |        |                      |
| Miscellaneous-Filing:                         |          |                                                        |        |                      |
| Petition:                                     |          |                                                        |        |                      |
| Patent-Appeals-and-Interference:              |          |                                                        |        |                      |
| Post-Allowance-and-Post-Issuance:             |          |                                                        |        |                      |
| UTILITY APPL ISSUE FEE                        | 2501     | 1                                                      | 480    | 480                  |

| Description        | Fee Code | Quantity | Amount | Sub-Total in USD(\$) |
|--------------------|----------|----------|--------|----------------------|
| Extension-of-Time: |          |          |        |                      |
| Miscellaneous:     |          |          |        |                      |
| Total in USD (\$)  |          |          |        | 480                  |

## Electronic Acknowledgement Receipt

|                                             |                                                        |
|---------------------------------------------|--------------------------------------------------------|
| <b>EFS ID:</b>                              | 48148504                                               |
| <b>Application Number:</b>                  | 18083727                                               |
| <b>International Application Number:</b>    |                                                        |
| <b>Confirmation Number:</b>                 | 6895                                                   |
| <b>Title of Invention:</b>                  | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |
| <b>First Named Inventor/Applicant Name:</b> | Andrei Golman                                          |
| <b>Customer Number:</b>                     | 85162                                                  |
| <b>Filer:</b>                               | Georgiy L. Khayet/Irina Klimova                        |
| <b>Filer Authorized By:</b>                 | Georgiy L. Khayet                                      |
| <b>Attorney Docket Number:</b>              | 1234.001US1                                            |
| <b>Receipt Date:</b>                        | 14-JUN-2023                                            |
| <b>Filing Date:</b>                         | 19-DEC-2022                                            |
| <b>Time Stamp:</b>                          | 05:05:55                                               |
| <b>Application Type:</b>                    | Utility under 35 USC 111(a)                            |

### Payment information:

|                                          |                  |
|------------------------------------------|------------------|
| Submitted with Payment                   | yes              |
| Payment Type                             | CARD             |
| Payment was successfully received in RAM | \$ 480           |
| RAM confirmation Number                  | E20236D607345901 |
| Deposit Account                          |                  |
| Authorized User                          |                  |

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

IPR2026-00275

| <b>File Listing:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                             |                                    |                                          |                  |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------------|------------------------------------------|------------------|------------------|
| Document Number                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Document Description        | File Name                          | File Size(Bytes)/<br>Message Digest      | Multi Part /.zip | Pages (if appl.) |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Issue Fee Payment (PTO-85B) | 18083727_Issue_fee_transmittal.pdf | 121774                                   | no               | 1                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |                                    | 12a92db4a66722a87c82b0de1e9568a35d99f42b |                  |                  |
| <b>Warnings:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                                    |                                          |                  |                  |
| <b>Information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |                                    |                                          |                  |                  |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Fee Worksheet (SB06)        | fee-info.pdf                       | 37937                                    | no               | 2                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |                                    | d6ac30179438c5364d0137c1720aa36f26dc9b8a |                  |                  |
| <b>Warnings:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                             |                                    |                                          |                  |                  |
| <b>Information:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |                                    |                                          |                  |                  |
| <b>Total Files Size (in bytes):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                             |                                    | 159711                                   |                  |                  |
| <p><b>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</b></p> <p><b><u>New Applications Under 35 U.S.C. 111</u></b><br/> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><b><u>National Stage of an International Application under 35 U.S.C. 371</u></b><br/> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><b><u>New International Application Filed with the USPTO as a Receiving Office</u></b><br/> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p> |                             |                                    |                                          |                  |                  |



# UNITED STATES PATENT AND TRADEMARK OFFICE

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

| APPLICATION NO. | ISSUE DATE | PATENT NO. | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|------------|------------|---------------------|------------------|
| 18/083,727      | 08/01/2023 | 11715457   | 1234.001US1         | 6895             |

85162 7590 07/12/2023  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

## ISSUE NOTIFICATION

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

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

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

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

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

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

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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

Andrei Golman, San Francisco, CA;  
Dmitrii Sadykov, Yerevan, ARMENIA;

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

Intone Inc., New York, NY;

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](http://SelectUSA.gov).



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

| APPLICATION NUMBER | FILING OR 371(C) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE |
|--------------------|-----------------------|-----------------------|------------------------|
| 18/083,727         | 12/19/2022            | Andrei Golman         | 1234.001US1            |

**CONFIRMATION NO. 6895**

85162  
IP Jurists PC  
100 Spectrum Center Dr  
Suite 900  
Irvine, CA 92618

## PUBLICATION NOTICE



\*OC00000059314151\*

Date Mailed: 07/13/2023

**Title:**REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

**Publication No.**US-2023-0223011-A1

**Publication Date:**07/13/2023

## NOTICE OF PUBLICATION OF APPLICATION

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

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

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

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

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

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



# UNITED STATES PATENT AND TRADEMARK OFFICE

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Address: COMMISSIONER FOR PATENTS  
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www.uspto.gov

| APPLICATION NO.        | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------|-------------|----------------------|---------------------|------------------|
| 18/083,727             | 12/19/2022  | Andrei Golman        | 1234.001US1         | 6895             |
| 85162                  | 7590        | 08/01/2023           | EXAMINER            |                  |
| IP Jurists PC          |             |                      | HANG, VU B          |                  |
| 100 Spectrum Center Dr |             |                      |                     |                  |
| Suite 900              |             |                      |                     |                  |
| Irvine, CA 92618       |             |                      |                     |                  |
|                        |             |                      | ART UNIT            | PAPER NUMBER     |
|                        |             |                      | 2672                |                  |
|                        |             |                      | NOTIFICATION DATE   | DELIVERY MODE    |
|                        |             |                      | 08/01/2023          | ELECTRONIC       |

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

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

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

ipjurists.pair@ipjurists.com



## 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  
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[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO. | ISSUE DATE  | PATENT NO. |
|-----------------|-------------|------------|
| 18/083,727      | 01-Aug-2023 | 11715457   |

IP Jurists PC  
100 Spectrum Center Dr  
Irvine, CA 92618

### EGRANT NOTIFICATION

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

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

## TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

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

|                        |                                                        |
|------------------------|--------------------------------------------------------|
| Application Number     | 18/083,727                                             |
| Filing Date            | 12/19/2022                                             |
| First Named Inventor   | Andrei Golman                                          |
| Title                  | REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS |
| Art Unit               | 2672                                                   |
| Examiner Name          | VU B HANG                                              |
| Attorney Docket Number | 264248.000210                                          |

### SIGNATURE of Applicant or Patent Practitioner

|                                                    |                        |                     |            |
|----------------------------------------------------|------------------------|---------------------|------------|
| Signature                                          | /Nicholas J. Gallo/    | Date (Optional)     | 2025-01-17 |
| Name                                               | Nicholas J. Gallo      | Registration Number | 60,758     |
| Title (if Applicant is a juristic entity)          | Attorney for Applicant |                     |            |
| Applicant Name (if Applicant is a juristic entity) | Sanas ai Inc.          |                     |            |

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



\*Total of 1 forms are submitted.

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0035. Public burden for this form is estimated to average 3 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email [InformationCollection@uspto.gov](mailto:InformationCollection@uspto.gov). **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.** If filing this completed form by mail, send to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

**POWER OF ATTORNEY BY APPLICANT**

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

|                    |             |
|--------------------|-------------|
| Application Number | Filing Date |
|                    |             |

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

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

11951

OR

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

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

☒ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name

Address

City

State

Zip

Country

Telephone

Email

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

Sanas.ai Inc.

- ☐ Inventor or Joint Inventor (title not required below)
- ☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)
- ☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)
- ☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

**SIGNATURE of Applicant for Patent**

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

Signature

Date (Optional)

Name

Maxim Serebryakov

Title

Chief Executive Officer

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

☒ Total of 1 forms are submitted.

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

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IPR2026-00275



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## ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #  
**18/083,727**

RECEIPT DATE / TIME  
**01/17/2025 02:07:21 PM Z ET**

ATTORNEY DOCKET #  
**1234.001US1**

### Title of Invention

REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALS

### Application Information

APPLICATION TYPE Utility - Nonprovisional Application  
under 35 USC 111(a)

PATENT # 11715457

CONFIRMATION # 6895

FILED BY Mary Frances Heeks

PATENT CENTER # 68802727

FILING DATE 12/19/2022

CUSTOMER # 85162

FIRST NAMED  
INVENTOR Andrei Golman

CORRESPONDENCE  
ADDRESS -

AUTHORIZED BY Nicholas Gallo

### Documents

**TOTAL DOCUMENTS: 2**

| DOCUMENT                                                 | PAGES | DESCRIPTION                                   | SIZE<br>(KB) |
|----------------------------------------------------------|-------|-----------------------------------------------|--------------|
| 20250117_POA_and_Transmittal_264248_000210.pdf           | 2     | Power of Attorney                             | 315 KB       |
| 20250117_Statement_Under_37_CFR_3_73_c_264248_000210.pdf | 3     | Assignee showing of ownership per 37 CFR 3.73 | 108 KB       |

### Digest

| DOCUMENT                                       | MESSAGE DIGEST(SHA-512)                                                                                                          |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 20250117_POA_and_Transmittal_264248_000210.pdf | D43DE8374D01AA7CC1C226540584CC7DCDAD40A2B9DC79C57F37D3DCA95F087DE0F7CD3CC9E9BA4B66D93A951924EB0F1EE08D05138FEE3398B42A60CBC0A8CC |

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20250117\_Statement\_Under\_3  
7\_CFR\_3\_73\_c\_264248\_00021  
0.pdf

35630D9DA81C2EE6C94DA802EB498AAEBFF5DD55C4ECF68  
1A01E0519CD87E3326FA912F0533AB1E024941AB140BEF972  
9DBDB8E5E8E78E6999949E6212403B2C

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

#### **New Applications Under 35 U.S.C. 111**

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

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

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

#### **New International Application Filed with the USPTO as a Receiving Office**

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

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

**STATEMENT UNDER 37 CFR 3.73(c)**Applicant/Patent Owner: Sanas.ai Inc.Application No./Patent No.: 18/083,727Filed/Issue Date: 12/19/2022Titled: REAL TIME CORRECTION OF ACCENT IN SPEECH AUDIO SIGNALSSanas.ai Inc., a corporation

(Name of Assignee)

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

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

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

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

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

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

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

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

- A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
- B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Andrei Golman and Dmitrii Sadykov To: Intone Inc.The document was recorded in the United States Patent and Trademark Office at  
Reel 062139, Frame 0472, or for which a copy thereof is attached.2. From: Intone Inc. To: Sanas.ai Inc.The document was recorded in the United States Patent and Trademark Office at  
Reel 069896, Frame 0420, or for which a copy thereof is attached.

[Page 1 of 2]

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

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

IPR2026-00275

Krisp Technologies EX1002 Page 131

**STATEMENT UNDER 37 CFR 3.73(c)**

3. From: \_\_\_\_\_ To: \_\_\_\_\_

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

4. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the United States Patent and Trademark Office at  
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5. From: \_\_\_\_\_ To: \_\_\_\_\_

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

6. From: \_\_\_\_\_ To: \_\_\_\_\_

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

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

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

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

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

/Nicholas J. Gallo/

2025-01-17

Signature

Date

Nicholas J. Gallo

60,758

Printed or Typed Name

Title or Registration Number

[Page 2 of 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.



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Alexandria, Virginia 22313-1450  
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| APPLICATION NUMBER | FILING OR 371(C) DATE | FIRST NAMED APPLICANT | ATTY. DOCKET NO./TITLE |
|--------------------|-----------------------|-----------------------|------------------------|
| 18/083,727         | 12/19/2022            | Andrei Golman         | 264248.000210          |

**CONFIRMATION NO. 6895**

**POA ACCEPTANCE LETTER**



\*OC000000083664172\*

11951

Troutman Pepper Locke LLP (Rochester)  
70 Linden Oaks  
Suite 210  
Rochester, NY 14625

Date Mailed: 01/29/2025

**NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY**

This is in response to the Power of Attorney filed 01/17/2025.

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

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

/mtklemichael/