(U) Classification Guide for
Human Language Technology (HLT) Models
2-20

Effective Date: 18 May 2011

CLASSIFIED BY: [Redacted]
Deputy Director for Analysis and Production

Classification Category: 1.4 (c)
Declassify On: 25 years*

ENDORSED BY: [Redacted]
Deputy Associate Director for Policy and Records

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**Description of Information** | **Classification/Markings** | **Category** | **Declass** | **Remarks**
---|---|---|---|---
A. (U) General
A.1. (U) The fact that NSA/CSS has created HLT models used for:
- Gender recognition
- Language
- Language variety/dialect recognition
- Speaker recognition
- Speech-to-text processing
- Speech activity detection
- Anomaly detection
- Phonetic recognition

UNCLASSIFIED | N/A | N/A
A.2. (U) The fact that HLT models are obtained, at least in part, by aggregating statistics derived from SIGINT collection
UNCLASSIFIED | N/A | N/A
A.3. (U) The fact that HLT models allow for collected audio files to be sorted and prioritized for linguists
UNCLASSIFIED | N/A | N/A
A.4. (U) The fact that statistics in a model can be generated from one or many audio files
UNCLASSIFIED | N/A | N/A
A.5. (U) The fact that new models are regularly generated, adding to the aggregate nature of the model
UNCLASSIFIED | N/A | N/A
A.6. (U) The fact that SIGINT voice collection (not further identified) can be identified as:
- male or female
- a specific language
- a specific language variety/dialect
- a specific speaker
- a sequence of words
- speech or nonspeech
UNCLASSIFIED | N/A | N/A
(U) Further details such as which specific language, or dialect, or speaker are classified. Consult applicable SIGINT guidance.
A.7. (U) HLT models used for:
- Gender recognition
- Language recognition
See Remarks
(U//FOUO) The classification of HLT models used for Gender and Language Recognition is dependent upon the classification of the messages used to train the model, up to SECRET//REL TO
| A.8. (U) HLT speaker recognition models | See Remarks. | USA, AUS, CAN, GBR, NZL. Although it is possible that the messages used to train the model may have a higher classification and/or more restrictive releasability than SECRET//REL, the original audio cannot be recovered from the model. SECRET//REL is sufficient to protect this type of model. (U) The Deputy Director for Analysis and Production may approve, on a case-by-case basis, foreign release of models containing otherwise non-releasable information. |
| A.9. (U) HLT acoustic models used for speech-to-text or phonetic tokenization | See Remarks. | (U) Consult applicable SIGINT guidance: Classification and foreign releasability should be in accordance with the highest classification and most restrictive releasability that applies to the targeted entities used in the model. (U) The Deputy Director for Analysis and Production may approve, on a case-by-case basis, foreign release of models containing otherwise non-releasable information. |
| A.10. (U) HLT language models used for speech-to-text | See Remarks. | (U) Consult applicable SIGINT guidance: Classification and foreign releasability should be in accordance with the highest classification and most restrictive releasability that applies to the targeted entities used in the model. (U) The Deputy Director for Analysis and Production may approve, on a case-by-case basis, foreign release of models containing otherwise non-releasable information. |
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- Phonetic tokenization

<table>
<thead>
<tr>
<th>A.11. (U) Speech activity detection models using syllable rate speech activity detection (SRSAD)</th>
<th>UNCLASSIFIED// FOR OFFICIAL USE ONLY</th>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.12. (U) Anomaly detection models</td>
<td>UNCLASSIFIED// FOR OFFICIAL USE ONLY</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**B. (U) Model Output**

<table>
<thead>
<tr>
<th>B.1. (U) Output of language recognition models</th>
<th>UNCLASSIFIED// FOR OFFICIAL USE ONLY</th>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.2. (U) Output of gender recognition models</td>
<td>UNCLASSIFIED// FOR OFFICIAL USE ONLY</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>B.3. (U) Output of speaker recognition models</td>
<td>See Remarks.</td>
<td>(U) Results generally indicate the recognized language and the degree of confidence in the determination, e.g. “Farsi with 90% confidence.” This information may require protection as classified when combined with other details regarding the input data.</td>
<td></td>
</tr>
<tr>
<td>B.4. (U) Output of acoustic speech-to-text and phonetic tokenization models</td>
<td>See Remarks.</td>
<td>(U) Results generally indicate the recognized gender and the degree of confidence in the determination, e.g. “Male with 75% confidence.” This information may require protection as classified when combined with other details regarding the input data.</td>
<td></td>
</tr>
<tr>
<td>B.5. (U) Output of language speech-to-text and phonetic tokenization models</td>
<td>See Remarks.</td>
<td>(U) Classification and foreign releasability of the results should be the same as the input data.</td>
<td></td>
</tr>
</tbody>
</table>

(U) Note: Declassification in 25 years indicates that the information is classified for 25 years from the date a document is created or 25 years from the date of this original classification decision, whichever is later.