

# Speech services in the European Commission

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**Yassin Amartib, Mihaela Calacean**

**DG Interpretation, Language Technology Sector**

SPEECH RECOGNITION

## Concrete needs in the Commission

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# Context

## Why Now?

**Language technologies** have made **rapid progress** in the recent years

Increase of **virtual meetings and conferences**

**New technologies** are creating **new services**

Users expect to be able **to use new technologies** in their daily work

**Concrete demand** in the European Commission to include speech services in the IT environment



## Main benefits

**Accessibility and Inclusiveness** – in particular for the hearing impaired

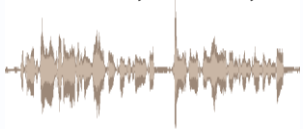
Reaching a **larger audience** through recordings with subtitles

**Efficiency** in meetings (e.g. easier to take minutes, and to find back information from meetings)

**Communication:** it becomes easier to search for video content

Further analysis (**AI/data technologies**) becomes possible, such as automatic summary of the meetings

MP3, WAV,...  
MP4, AVI,...



Drop files to upload (or click)

Supported formats:

From: German

Version: Default

Output format: docx vtt srt

Submit

DE, EN, FR, ES, PL, IT, NL  
(+20 other languages)

# Live transcriptions for meetings / conferences



# Beyond transcripts

Demands for post-processing of the transcripts after the event:

- Verbatim reports
- Meeting summary / automatic minutes
- Keywords extraction
- Sentiment analysis
- Automatic translation
- Speech synthesis
- Subtitles

Live

# Live transcription portal

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# Spokesperson's Service - Midday Press Briefings

The screenshot shows a mobile browser interface. At the top, the status bar displays 'Teams 13:08 Tue 21 Feb' and a battery level of 19%. The browser's address bar shows the URL 'as-sttpilot-webportal-poc.azurewebsites.net'. Below the address bar, there are several open tabs, including 'EC AV PORTAL', 'Start Page', and 'SpeechTT W...'. The main content area features the European Commission logo and the title 'Speech-To-Text WebPortal'. The page is titled 'Mid Day Press Briefing 21-02-2023' and shows the time 'Today, 12:00 - 14:00'. A section titled 'Live transcription' contains a list of speech segments with timestamps and language indicators. The segments are as follows:

Timestamp	Language	Text
13:07:03	English	Good afternoon to
13:07:05	French	Que j'ai.
13:07:09	English	Everybody, and welcome to the European Commission's press room. Thank you also for following us live on Europe by satellite. Today is Tuesday, 21st of February. Allow me to start with the agenda of tomorrow's college meeting, which is now confirmed following the meeting of Heads of Cabinet Air yesterday. Tomorrow, the college will hold an orientation debate on competitiveness. This will be an important step in the preparation of a package of proposals on this topic.
13:07:35	English	As you probably remember, heads of States and Government invited the Commission. There is special European Council of 9th of February to prepare a strategy to boost competitiveness and productivity in the European Union. That strategy will be discussed at the next European Council meeting on the 23rd and 24th of March, and the orientation debate tomorrow will allow an indirect exchange of ideas.
13:08:05	English	Among members of the college to enable the Commission to develop that package and to finalise it in the following weeks. Since this is a debate, no formal Commission decisions will be adopted tomorrow and therefore we will not have a college read out, so our next meeting will be our midday briefing of Thursday



CUSTOM MODELS

## Adapting the system to the Commission's demands

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# Training of Custom Models

## ✓ Resources

### ✓ Textual

- ✓ Surgical: Corrections of mistakes observed during data validation
- ✓ Best guesses:
  - ✓ Interviews, current news, named entities

### ✓ Pronunciation

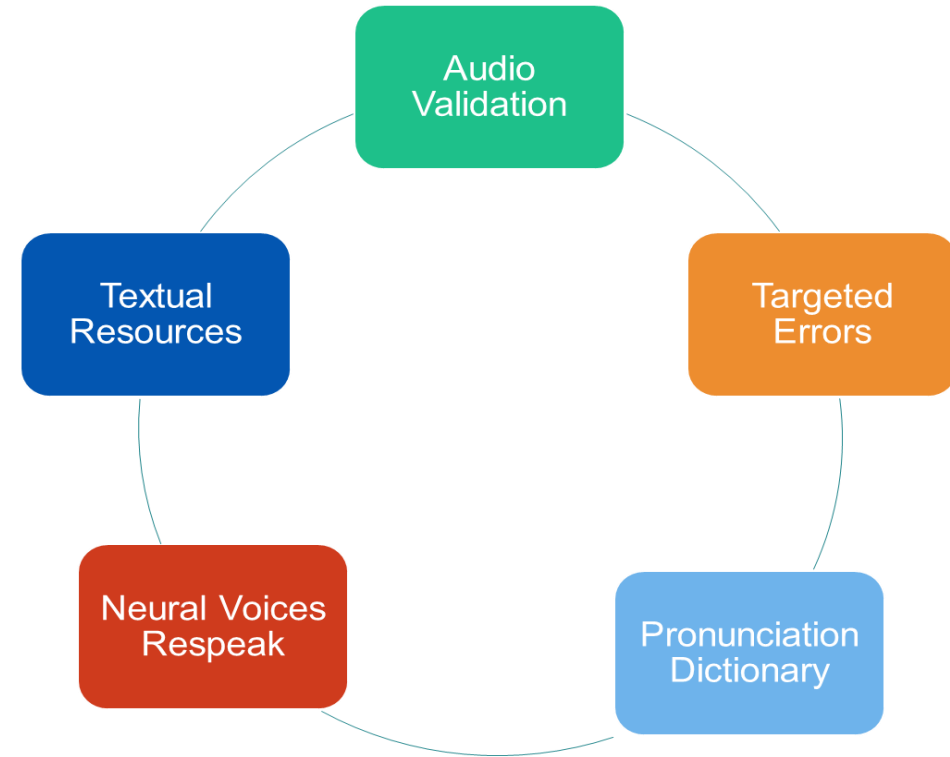
- ✓ Corrections:

Correction	Observed error
varhelyi	vahali
varhelyi	verhelle

- ✓ Abbreviations, CamelCase words, alphanumeric words

### ✓ Audio (respeak + speech produced with synthetic voice)

- ✓ Names of commissioners, EU institutions and buildings, meeting rooms

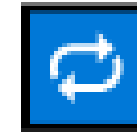


# Training of Custom Models

- ✓ Training
- ✓ Testing and evaluation
  - ✓ Side-by-side verification

Language	Test data set	WER	
		Custom model (2022-SPP- MPB0017)	Baseline (20221110)
<b>English</b>	18Mar2021-mpb-WP1	3.16%	5.76%
	Commissioners' names	5.93%	71.81%
	Errors apr2022	2.55%	9.55%
	Respeak	2.15%	8.60%

- ✓ Deployment



# Training of Custom Models

- ✓ Continuous maintenance
  - ✓ New names, terminology
    - ✓ Türkiye vs Turkey
  - ✓ Identifying bugs and getting them fixed

Synthetic Speech


**E-Loqui: Convert text to eloquent speech**

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# E-Loqui: platform for voiceover generation

- ✓ Development of a pilot
  - ✓ create voiceovers in all EU official languages + accession countries languages
  - ✓ for conference video content, e-Learning etc.
  - ✓ Predefined settings (character-voice association, pitch, rate, etc.)
    - ✓ Speech experts
  - ✓ Secure login, track usage, history of team projects (workspaces)
  
- ✓ Customs and Tax EU portal

# E-Loqui: platform for voiceover generation

e-Loqui - Convert Text to Speech!Invited User

My Workspaces > Frontend-Dev-Workspace > The Degree of Urbanisation > eFCA\_Transcript\_2\_EN.xlsxRefresh

### eFCA\_Transcript\_2\_EN.xlsx English (en)

0:00 / 0:03

Sequ...	Character	Text
1	Julia, femal...	The European Commission and the EU Member States have jointly developed the electronic forms for exchange of information and the eFCA to simplify the process for exchanging information between competent authorities from different Member States. Throughout this course, you will focus on how to carry out typical tasks within the eFCA for Direct Taxation, rather than the legislative or technical background.
2	Julia, femal...	This course has been designed for those tax officials who work with Direct Taxation e-Forms and have one or more of the following roles: Editor, Sender, e-Forms Monitor, or Statistics Monitor.
3	Julia, femal...	Take a moment to get to know the characters of this course. You will meet them frequently as you progress through the course.
4	Julia, femal...	Let's look at the controls that help you navigate through the course. Please note that some pages contain audio. You will see a transcript switch on these pages, allowing you to read the text if you cannot listen to it. We recommend you to keep either audio or the transcript turned on as they contain important information in addition to the on-screen text.
5	Julia, femal...	The course map allows you to quickly access the chapters you may want to review. You may at any time access this course map through the upper toolbar.
6	Julia, femal...	One of the benefits of the Internal Market is that EU citizens and businesses have the freedom to move, operate and invest

#### Settings

##### Character Mapping

File Character	Pre-defined ...
Julia	Female1
Max	Male1
Maria	Female2

##### File Character

Select Character

##### Pre-defined Characters

Select Pre-defined Character

##### Voice

Select Voice

Pitch: 1

Rate: 1

