**2nd webinar on Artificial Intelligence in the justice field**

***Transcription tools: Speech-to-text and Text-to-Speech***

21 June 2021

The webinar begun with an opening speech by **Mr Richard Sonnenschein**, Acting Director of DG JUST (Directorate B - Criminal justice), who recalled that the second webinar is part of a series, organised following the Communication on digitalisation of justice of 2 December 2020. Highlighting how AI-related applications are already part of daily life, he underlined its potential to improve the efficiency of justice in the EU. He also recalled the 2018 strategy on AI for Europe, the 2020 white paper on artificial intelligence, the 2020 State of the Union address, the 2030 Digital Compass Communication, and the 21 April Commission proposal for an Artificial Intelligence act. He also took stock of the various EU funding instruments which could support the digital transformation process. In conclusion, he highlighted that collaboration on aspects related to the use of AI technologies is essential.

Following the opening speech, various experts gave presentations on their experiences in the use of speech-to-text and text-to-speech AI-based tools:

* **The** Head of Sector for Machine Translation of DG Translation (Unit R.3 - Information Technology) provided a historical perspective on AI-related technological developments at the Commission, which begun with machine translation to then move onto other areas (in particular to speech-to-text applications). He stressed that there is an opportunity for the Commission to build a service in the area of AI for speech-to-text for languages that currently are not served well by most commercial products available on the market. For example, while French, English, German, and Spanish are usually well served, other less popular languages are often not covered. The Commission will continue developing this service to ultimately ensure coverage for all EU official languages. At the moment, in order to access the Commission transcription service, authentication is required due to mainly capacity constraints. Public administrations, universities and enterprises can still use the Commission service following registration and authentication.
* **A** Regional Technology Officer (Microsoft) gave an engaging practical demonstration of the different transcription services provided by Microsoft (based on the Microsoft Azure cloud). The speaker pointed out that there are many well-known commercial applications we are familiar with, such as forms of conversational AI (bots and personal assistants). As speech and conversation are very much crucial elements when it comes to judicial proceedings, these services and tools are relevant for the justice field as well. To provide a practical example, the representative noted Microsoft’s ongoing collaboration with the European Parliament.

After the coffee break, four Member States had the opportunity to share their experiences:

* **A representative from Portugal** talked about the recording of proceedings and the documentation of the evidence gathered by the court. The person presented the GAVTA project, which should be implemented by the end of this year and aims at developing audio and video automatic transcription.
* A lawyer and IT strategist at the Swedish National Courts Administration, presented the Swedish court system and its challenges when it comes to managing the heavy workload presented by the need to navigate case-related, extensive, recorded material. As recommended future developments in this field, the Swedish representative highlighted the need to work on real time translation and to guarantee the security of cloud-based services.
* The Head of Area of D.G. for Digital Transformation of the Justice Administration (Spain) presented their initiatives to improve justice through technology. The Spanish representative reported great benefits from the adoption of speech-to-text technologies in the justice field and expressed the commitment to expand the use of said technologies further in the upcoming years.
* **Representatives from Croatia** talked about the “Newton dictate” software used in Croatia to transcribe spoken language into text in real time. The tool also provides several other options, such as text-to-speech for reading texts on the web adapted for visually impaired individuals. The speakers highlighted the benefits of using speech-to-text solutions, such as increased efficiency in information management.

The webinar ended with a lively Q&A session that focused on current challenges and opportunities when it comes to speech-to-text and text-to-speech in the justice field. The following issues were raised:

* Limited investments and initiatives to develop such tools for the less popular languages and sign language were recognized by the participants, as well as the need to build upon the variety of projects already existing and being developed;
* The issue of limited number of customized solutions in the justice field was noted, though in the exchanges with the presenters, there was evidence consensus that many existing tools are modular and that dictionaries developed in one context can be reused;
* Issues related to the quality of transcriptions when multiple, overlapping voices need to be identified and transcribed creates challenges. There was a mix of participants who have never considered this issue and those who have already encountered it and have worked on its resolution;
* It was pointed out that machine-generated punctuation was a challenge, in particular when speakers had not received prior training;
* The development of translation tools in coordination with transcription tools was stated as a matter of particular relevance, as well as the need to be able to face the challenge presented by multimodal systems;
* DG CONNECT intervened to note the extreme relevance of the data being collected as part of the presented projects.

The agenda and the recording of the event are available [here](https://ec.europa.eu/info/policies/justice-and-fundamental-rights/digitalisation-justice/conferences-and-events_en).