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|  | **Document C25/INF/7** |
| **23 May 2025** |
| **English only** |
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| Note by the Secretary-General | |
| REPORT ON THE CHALLENGES AND OPPORTUNITIES OF THE USE OF AI-POWERED INTERPRETATION | |
| **Purpose**  This document provides an overview of the opportunities and challenges of using AI-powered interpretation in ITU meetings, as requested by the Council Working Group on the use of the six languages of the Union (CWG-LANG) in its 14th meeting in January 2024. It was originally submitted as information document [CWG-LANG-16/INF/1](https://www.itu.int/md/S25-RCLCWGLANG16-INF-0001/en) to the 16th CWG-LANG meeting, which requested its submission to Council-25.  It follows discussions on exploring all options for the provision of interpretation as per Resolution 154 (Rev. Bucharest, 2022) and increasing the availability of interpretation services in ITU meetings to enhance the participation of all Member States within existing budgetary limitations in line with ITU’s commitment to multilingualism.  **Action required by the Council**  This document is transmitted to the Council **for information**.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **References**  [CWG-LANG-16/INF/1](https://www.itu.int/md/S25-RCLCWGLANG16-INF-0001/en), [C25/12](https://www.itu.int/md/S25-CL-C-0012/en) | |

Background

# 1 Professional interpretation services at ITU

Simultaneous interpretation in the six official languages (or specific language combinations) is provided for ITU conferences, assemblies and meetings in line with the Measures and Principles for Interpretation and Translation in ITU (Document [C22/INF/7](https://www.itu.int/md/S22-CL-INF-0007/en)).

Interpretation services are provided by professional interpreters recruited as short-term staff and in accordance with the rules of the International Association of Conference Interpreters (AIIC) agreement, to which ITU is a signatory.

A biennial budget for interpretation is allocated to cover the costs of interpretation within Document C22/INF/7. There is no allocated interpretation budget for any meeting other than those listed in this document.

# 2 Current status of AI-powered interpretation at ITU

**2.1** ITU monitors developments in AI-powered interpretation and is currently testing and evaluating different solutions and service providers. This is important to keep up to date with new technologies in language services, trends and practices, with a view to enhancing the efficiency and scope of ITU’s linguistic services.

**2.2** ITU has tested AI-powered interpretation in informal meetings where no professional interpretation is offered. Testing to date has been carried out with two service providers:

 Wordly – tested at Innovation and Entrepreneurship Alliance for Digital Development (4 April 2023) and ITU driving ICT/digital accessibility to build a digitally inclusive world for all (20 April 2023)

 Interprefy – tested at pre-Council 2023 retreat session (10 July 2023) and *AI for Good Summit 2023* and *2024*.

Although no formal assessment framework was used, initial delegate feedback indicated that the quality of interpretation was acceptable for conveying general information in most languages, with the exception of Arabic. However, the quality of AI-powered interpretation to date remains insufficient for formal meetings which involve negotiations and nuanced content. None of the AI Interpretation service providers contacted could provide ITU with any objective evaluation on the quality of the AI interpretation, although they are committed to improving the quality for all languages, in particular Arabic.

**2.3** A general assessment of AI interpretation tools and service providers has been carried out in line with the ITU Data Protection and Privacy Policy while taking into account data security in the use of AI tools, services and systems. The assessment focuses on identifying potential risks associated with AI-powered interpretation and aims to help event organizers in deciding whether to test in a given meeting and how to inform event participants accordingly. Factors taken into consideration when assessing AI interpretation service providers and identifying potential risks include:

 Unauthorized access, leading to intentional misuse of data by the service provider or third parties; accidental misuse of data; or breach of data confidentiality. These risks are mitigated by existing ITU ICT infrastructure to prevent unauthorized access, and by the use of AI-interpretation in low-sensitivity meetings only.

 Poor quality and reliability of interpretation due to possible automated discrimination, leading to different results for meeting participants with different accents and to misunderstandings during meetings. This can be mitigated by monitoring and regular evaluation of the interpretation quality.

 Reputational risk for ITU if the service quality is poor or data is compromised. Mitigation measures include informing all participants of the use of AI tool, including training, disclaimers and privacy notices.

 Transparency risk if participants are not fully informed of use of AI tool; mitigated by full provision of information on the use of AI, disclaimers and privacy notices.

# 3. Opportunities and challenges of AI-powered interpretation at ITU

Based on the current situation, the following principal opportunities and challenges of using AI-powered interpretation can be identified:

**3.1 Opportunities**

 AI-powered interpretation provides cost-effective, flexible interpretation options, enabling ITU to greatly increase the scope and availability of interpretation in all six official languages in ITU meetings

 The cost of AI interpretation services is significantly lower than professional human interpretation both in terms of human resources and physical infrastructure. Costs are restricted to fees for software provision and limited technical support

 AI interpretation is not subject to limits on time or location in the same way as professional human interpretation

 AI interpretation services can be technically integrated into the three modalities of ITU meetings, fully virtual, physical, or physical with remote participation, with existing meeting infrastructure

 AI offers the potential to provide interpretation in additional languages other than the six official ones.

**3.2 Challenges**

 The quality and accuracy of AI interpretation services is not yet sufficient for formal meetings with negotiations, consensus-building discussions or highly technical and/or sensitive content

 Levels of accuracy are unequal as AI favours dominant languages (more richly resourced), or dominant contexts of specific languages (accents, dialects, environments)

 AI interpretation may be less reliable in a multicultural meeting or international setting given possible bias (response to different accents or less well-resourced languages)

 The lack of objective measures of quality in AI interpretation (compared to certification of human interpreters) means trust in the quality and accuracy of AI interpretation can only be built via testing and experience

 Latency issues may arise as language models require context for semantically accurate translation and interpretation

 Automatic detection of the source remains a challenge: it is necessary for someone to follow the discussion and key-in to the AI interpretation platform the upcoming input language on the floor in order for the platform to translate/interpret to the target language.

 Data privacy and security risks as the discussion is being transmitted to cloud-based platforms, albeit with data encryption and security measures exercised by the AI Interpretation service providers, including exposure to cybersecurity risks.

## 3.3 Conclusions

AI interpretation continues to develop and improve rapidly, focusing on areas such as more lifelike voice synthesis, cloning individual voices, support for additional languages and improved tolerance for noisy environments, accents and dialects, significantly enhancing accuracy.

Market studies suggest that most current challenges of AI live interpretation will be solved within two years, although the ability for AI to communicate with high fidelity remains uncertain.

In certain scenarios, the benefits of using AI outweigh the nuanced understanding and more accurate output of professional human interpreters (which remains essential for formal meetings in the near future). The scenarios where AI interpretation may be considered a suitable option include meetings where no human interpretation is available (including where time pressures make it impossible to recruit), where different languages are requested and when the content is of a general nature (neither sensitive nor technically complex).

# 4 AI Interpretation in ITU: future steps

**4.1** ITU will continue to test and evaluate the quality of output of AI-based interpretation tools and identify new opportunities, given that technologies are evolving quickly, with new digital features, tools and platforms available on a regular basis. AI interpretation tools will be evaluated for longer durations under live conditions and in multiple environments to ascertain operational viability.

As the quality of AI interpretation services today is not sufficient for formal meetings, testing will focus on the following types of meetings:

 Floor-only meetings with little dialogue with the audience

 Informal meetings such as internal secretariat meetings with little delegate involvement, and thematic workshops

 Regional meetings (often at short notice and with a maximum of 3 languages)

 Events involving roundtable discussions with more than one table where in-person interpretation would be impractical or prohibitively expensive

 Non-decision-making working group meetings where interpretation would otherwise not be available.

## 4.2 Procurement and budget

In line with the policy of the ITU Procurement Unit, AI service provider companies can be used free of charge for demos (e.g. for a one-hour meeting, not for a systematic programme of testing). The cost of testing AI service provision is approximately 150 -300 USD per hour for all language combinations (depending on numbers of users/service provider selected). A temporary, pre-paid operational engagement with each vendor is recommended for testing purposes at present, before considering a potential long-term contract in the future.

Event organizers in each sector or department provide the budget for interpretation services for each event or meeting with interpretation. AI-powered interpretation will be tested in meetings which do not currently offer interpretation and therefore do not have a dedicated interpretation budget.

## 4.3 Evaluation criteria

The performance of different AI interpretation service providers will be evaluated by the ITU professional language section and by the sectors/department organizing each test meeting. The assessment will take the form of a real-time evaluation and quality control for a 15-minute period of an individual meeting. In addition, a post-meeting questionnaire could be shared with meeting participants to provide feedback on the quality and experience of the AI-based interpretation.

Evaluation factors are in line with the AI interpretation tool assessment frameworks used by other UN organizations, and include:

 Quality evaluation based on number of errors of omission and errors of meaning

 Style/grammar and terminology errors

 Textuality, based on coherence (smooth flow and logical organization); cohesion (connection between sentences and ideas); purposefulness (achieving clear and specific purpose, such as to inform, persuade or entertain); and situational appropriacy (adhering to cultural norms, context and audience expectations).

**4.4** ITU will continue to collaborate with other UN organizations to share experiences on issues such as evaluation of quality, data protection, privacy, technical readiness and integration with existing meeting systems.

**4.5** The ITU interpretation service and IS department will work with ITU event organizers to test AI-powered interpretation in any meeting within the categories outlined. Progress on testing, including delegate and secretariat feedback, evaluation of service providers and analysis of quality, accuracy and security risks, will be presented to a future meeting of CWG-LANG.

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