

Audio Enhancement and Transcription Interlaboratory Comparison Exercises

Katherine Earnshaw¹, Bryony Nuttall¹, and Richard Rhodes¹

¹*The Forensic Voice Centre, York, UK*

Katherine.earnshaw@forensicvoicecentre.com

We would like to use the poster session to inform practitioners within the IAFPA community about two interlaboratory comparison exercises in audio enhancement and transcription taking place later this year. Our aim is to share our plans for how these exercises will run and to invite practitioners who currently undertake audio enhancement and/or transcription casework to express their interest in participating. We also welcome advice from other organisations that have run similar exercises on best practice procedures.

Context

The UK Forensic Science Regulator's Code of Practice requires all forensic units performing forensic science activities (FSAs) in the UK to assure the quality of their results. Accordingly, it is recommended that forensic units must "determine the availability and evaluate the appropriateness of schemes for proficiency tests (PT), interlaboratory comparisons (ILC) and collaborative exercises (CE) that are relevant to its FSAs" (UK FSR Code of Practice 30.1.1). While there are institutions that provide speech and audio related PT schemes for its members such as The European Network of Forensic Science Institutes (ENFSI); there are still relatively few opportunities to participate in exercises such as these across the UK and internationally. For this reason, we are proposing to run two relatively small-scale ILC exercises: one in audio enhancement and one in forensic transcription. The purpose of these exercises is to share processes and methods and to discuss best practices for these FSAs. The results may also assist in demonstrating practitioner competence, method development and method validation.

Summary of process

The two ILCs will be facilitated by The Forensic Voice Centre using recordings made by our partners in the Department of Language and Linguistic Science at The University of York. The recordings are designed to be forensically relevant in terms of their content and quality, but importantly they are also accompanied by high-quality 'ground truth' recordings which can be consulted after the exercises are completed. This is particularly useful for the transcription ILC where transcripts of the 'ground truth' recordings can be consulted to assess accuracy. Interested participants will be asked to complete a data sharing agreement with the University of York and then they will be provided with formal instructions and the relevant recordings for analysis. We anticipate that the audio enhancement ILC will take place first, followed by the forensic transcription ILC during Autumn of 2026; however, exact timescales will be agreed once the list of participants has been determined.

Audio Enhancement ILC

Participating practitioners will be asked to enhance the audio in some forensically relevant recordings, to document their process followed, and to submit a report reflecting their standard casework practices. This will be followed by a roundtable discussion to examine inter-laboratory variation in approaches and outcomes. Although the speech in the recordings is spoken in English, we anticipate that this exercise will be suitable for any practitioners within the IAFPA community who routinely carry out enhancement casework.

We invite feedback on how to make this exercise most useful, e.g., how do we assess the extent to which the intelligibility of the speech in the recording has been improved? Should we ask lay listeners or experts to rate the improvement? What criteria should we use?

Forensic Transcription ILC

Participating practitioners will be asked to transcribe the audio in a forensically relevant recording, to document their process followed, and to submit a transcript and report reflecting their standard casework practices. This will be followed by a roundtable discussion to examine inter-laboratory variation in methods and transcript content. There will also be an opportunity to review the transcripts of the forensically relevant material against the ‘ground truth’ recording and its corresponding transcript. As the speech in the recording is spoken in English, we anticipate that this exercise will only be suitable for practitioners within the IAFPA community who routinely transcribe English speech in their casework.

We invite feedback on how to make this exercise most useful, e.g., what is the best method to ‘grade’ transcripts and/or the types of errors that occur?

All interested parties are invited to express their interest in participating in either of the two ILC exercises via a link which will be shared during the conference.

References

[UK] Forensic Science Regulator. (2025). Forensic science activities: Statutory Code of Practice (version 2 – May 2025) - [URL: https://assets.publishing.service.gov.uk/media/68401f4be550203c8209cce9/2025_05_20_Code_of_Practice_final.pdf]