3.17 Forensic Voice Comparison

Keywords

Voice comparison; speaker recognition; security; forensics; tracking of criminal activities

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Functional description

Forensic voice comparison involves the expert assessment of voice recordings to determine the identity of a speaker (offender). The speakers involved are termed as known speakers and questioned speakers. The former is a set of one or more speakers whose identity is known while the latter is the speaker whose identity we wish to confirm with respect to the known speakers. A fully-automatic (or semi-automatic) approach available at Idiap exploits an automatic speaker recognition system to obtain, through a series of carefully designed steps, a score signifying the proximity of the voice characteristics of the offender to that of the known speaker.

Innovative aspects

– Language-independent technology based on a distribuable service that takes into account relevant population data matching the questioned-speaker data
– Score evaluation and quality assurance provided in a final report
– Client-server interaction using the standard REST API

Commercial application examples

– Pay-Per-Use licensing scheme or fully commercial system can be offered
– Service specifically targeted for forensic voice comparison that exposes latest tehnologies in speaker recognition
– Latest technology with large interest for government security burreaus and law-enforcement agencies

Software & IPR status

The above mentioned approach to forensic voice comparison is being developed internally and for the partners in the relevant projects.