



Audio Fast & Automated Tuning: Development of a smart algorithm for in call voice analysis

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Context

The Intel Audio COE team (Center of Excellence) located in Toulouse includes around sixty specialized software experts in the development of embedded audio solutions. These solutions address all Intel platforms (mobile, tablet, PC, IOT...). The SAMoVA team, from Toulouse Institute of Computer Science Research (IRIT), specializes in Automatic Audio Analysis.

Mission description

The CAVS (COE Audio Voice Speech) Toulouse Intel team wants to develop a new application service based on "light" SAR (Speech recognition).

The service's objective is to identify (classification) during a voice call (type VoIP, Skype...) "Nonverbal information" (emotions, interrogative sentence...). This new algorithm will run on the downlink and/or uplink (local or remote user). First, there will be a software integration algorithms University Platform on Intel (PC type). Indeed, we wish to identify the type of non-verbal information (emotions, interrogative sentence...) that can be extracted from a conversation (VoIP). To do this, a description and achievement tests will be conducted (WER equivalent).

During the internship:

- Propose methods of classification / identification of nonverbal voice elements,
- Extract protocols (techniques) most relevant,
- Propose methods of analysis of the results (corpus tests),
- Carry out the evaluation of algorithms,
- Write (C/C++ code) an application prototype.

Prerequisite skills

- Audio and voice signal processing
- Speech recognition Analysis techniques
- C/C++ programming language
- Acoustic and electroacoustic notions (nice to have)
- Mandatory English

Other details

- Duration: 6 months
- Location:
 - o Intel Corporate S.A. – 2, rue du Dr Maurice Grynfogel – 31100 Toulouse
 - o IRIT (UPS)