

3.3 Multilingual and accented speech recognition

Keywords

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Functional description

Idiap is one of the world's leading providers of multilingual speech recognition technology. Multilingual speech recognition involves numerous research challenges, including adaptation on limited amount of training data and mixed language recognition where it is not even possible to assume that one knows in advance the language being spoken. Idiap's system can rapidly adapt to under-resourced languages, i.e. languages that have only a small amount of data available to train a speech recognition system, or to accented speech. Furthermore, Idiap's system allows to perform mixed language speech recognition for Swiss German, Swiss French and English.

Innovative aspects

- Parsimonious use of language adaptation data (adaptation with very little amount of data)
- Fast adaptation to unseen languages
- Generic probabilistic multilingual framework

Commercial application examples

- Robust non-native speech recognition
- Mixed language speech recognition
- Language identification

More information

“Automatic speech recognition and translation of a Swiss German dialect: Walliserdeutsch”, Philip N. Garner, David Imseng, and Thomas Meyer in: *Proceedings of Interspeech*, 2014.

Software & IPR status

Most of the underlying software is open source. Some databases associated with certain languages may require separate agreements.

The Idiap spin-off recapp IT (www.recapp.ch) commercialises parts of the technology and can provide multilingual speech recognition as a webservice.