

Automatic Speech Recognition

The reliable and contactless interface for your human-technology interactions

Hands free for what's important

- **Speech-based operation of technical systems** - without visual or physical contact
- **Robust speech detectors** - reliable even under challenging acoustic conditions
- **With or without cloud** - for maximum protection of your data without internet too
- **Minimal detection error rate** thanks to intelligent algorithms
- **Freely selectable keywords** for speech recognition
- **Simple integration** in existing applications and devices possible
- **Makes your products easy to use**



Fraunhofer IDMT speech recognition systems function under challenging acoustic conditions, without an internet connection and at a long distance from the microphone. As a result, they are particularly robust, safe and reliable. This is owed not least to their modelling on signal processing in the human auditory system.

Everyday activities often demand more from us than two hands alone can master. In such situations, the contactless operation of technical systems delivers significant added value. In other areas the recognition of speech creates security - one of our examples: **Detecting calls for help.**

Significant **time and cost savings** can be achieved in **business and industry** through automatic speech recognition, such as helping staff with **documentation tasks** or the intelligent processing of customer enquiries via a **dialogue system**. Particularly in areas where occupational safety is an important factor, voice control can revolutionize processes. In **medicine**, assistance systems facilitate **hygienic procedures in the operating theatre** and foster greater **safety and independence** for elderly persons or individuals with limited physical mobility. In „**smart homes**“ and **motor vehicles**, users profit from the comfortable operation of building technology or media systems.

Cooperation with the IDMT in Oldenburg

- **Development** of application-specific detector technologies, including licensing
- Microphoning and signal preprocessing
- Individual, application-specific **adaptation of vocabulary**
- Integration in mobile applications and new service models
- **Evaluation studies**, e.g. technical evaluation of systems available on the market



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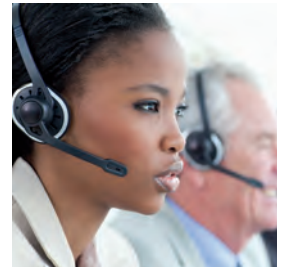


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The goal of the Division Hearing, Speech and Audio Technology of the Fraunhofer Institute for Digital Media Technology IDMT is to implement scientific findings on auditory perception of normal and impaired hearing in technological applications. Main research is improving speech intelligibility, personalized audio reproduction in as well as computer-based recognition of speech and acoustic events. Our fields of application include Consumer Electronics, Transportation, Automotive, Manufacturing, Security, Telecommunications and Health.



photo: Fraunhofer IDMT

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