

# VOICE BIOMETRICS

## GritTec's Speaker-ID: Automatic Text Independent Speaker Identification

### Overview

GritTec's Speaker-ID: Automatic Text Independent Speaker Identification (Version 4.xx) is intended for automatic identification (or voice verification) of a speech signal of unknown speaker by paired comparing with speech signal of target speaker. Designed algorithm of speaker identifications is based on dual comparison spectra features of unknown voice with the spectra features of target voice. Spectra features are calculated with provision of dynamic determinations of channel distortion level and external hindrances and noises. It allows to compensate channel distortion and influences of external hindrances with comparing spectra features, put into the original speech signal.

### Applications

- For automatic voice identification of unknown voice by phonogram of telephone negotiations;
- In systems with high safety level, for instance, when access to digital information is limited by circle of given persons;
- Applications where it is necessary to identify a person using peculiarities of his voice.

### Features

- Operation with low SNR;
- Fast adaptation to changing of channel distortion and external noises;
- Speaker identification reliability not less than 90% if both of speech signals were recorded in the same channel and duration of input signal was not less than 15 seconds;
- Speaker identification reliability not less than 80% if both of speech signals were recorded in different channels and duration of input signal was not less than 15 seconds;
- Duration of a speech signal with a voice example used for correct reception of voice parameters for the target speaker not less 15 seconds;
- Supporting voice identification or voice verification in multi-threading mode;
- Automatic voice identification or voice verification doesn't require special skills;
- Supporting the software license key or hardware license with USB key;
- Supporting the license key depends from the quantity of target samples are used in stream of voice identification;
- Supporting the license key depends from the quantity of voice identification streams or depends from the quantity of voice training streams;
- Easy integration with target applications.

### Signal requirement

- Signal format: 16-bits linear, 8 kHz sampling rate;
- SNR, at least 10 db;
- Frequency range: 300-3400 Hz or better.

### Availability

- PC demo programs under MS Windows x86/x64, Linux x86/x64 platforms;
- SDK packets for developers under MS Windows x86/x64, Linux x86/x64 platforms (object code or ANSI C++ float point code) with software or hardware (USB key) licenses is available on request.

### About GritTec

GritTec Laboratory (GritTec Ltd.) specializes on research and development of algorithms and technologies in the field of speech and audio processing. GritTec's research is focused on speech enhancement, speech concealment, voice biometric, speech recognition, speech synthesis and other speech and audio technologies.

### Contact

url: <http://www.grittec.com>

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