CLEAR VOICE SDK

Set of 3 Software Developer Kits (SDK)
for Automatic Speech Enhancement & Noise Filtration

◆ **Denoiser** - Automatic speech enhancement and noise filtration

◆ **Denoiser-by-Reference** - Automatic noise filtration of stable noise

✝ **Declicker** - Automatic pulse like noise filtration

Advantages

Adaptive filters of Clear Voice Package dramatically improve communication quality in telephone, satellite and radio channels, and can be used to increase the accuracy of speech recognition systems.

◆ Continuous and adaptive removal of background noise from speech
◆ Improves voice quality and intelligibility
◆ Decreases subscribers' listening fatigue
◆ Reduces time of communication due to eliminating of double-checking
◆ Increases voice compression systems quality
◆ Improves performance of automatic speech recognition systems

SDK Package

32 bit DLL (dynamic link library) for MS Windows XP/2000/9x/ME/XP;

User's manuals;
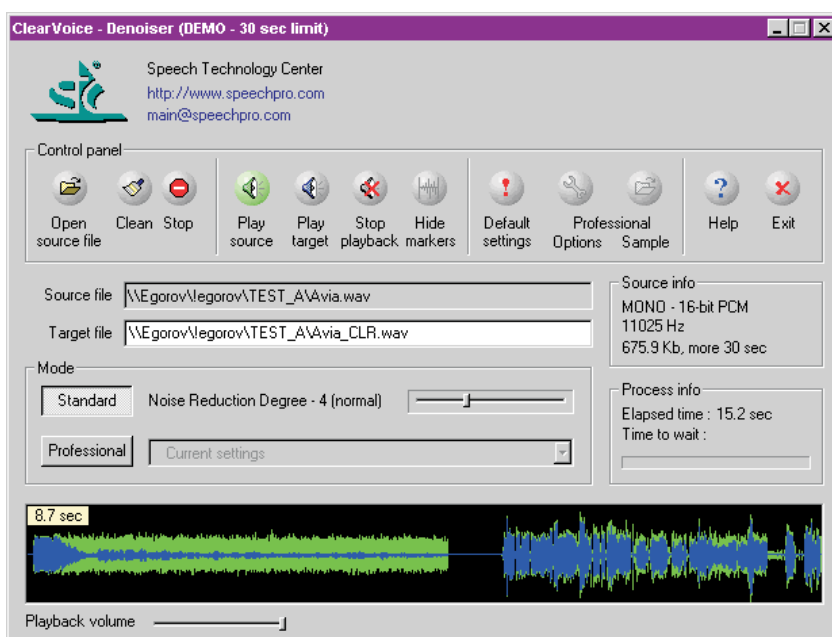
Sample demo software with sources in Visual C++.

SDK for other OS and ANSI C source codes are available by special order. Prices will be quoted upon request.

Free demo is available at the web site.

Applications

◆ Improvement in communication quality in Telephone, satellite and radio channels.
◆ Enhancement for Radio transmitting and Audio Data
◆ Superior compression on VoIP and PC telephony;
◆ Call Centers;
◆ Improving poor quality recordings of music/speech
◆ Sound networks;
◆ Large scale IC for communication applications;
◆ Voice recognition systems;
◆ Sound recorders;
◆ Dictation devices;
◆ Voice logging systems;
◆ Audio products;

This is a Denoiser sample software screenshot. In the waveform field (lower left) there is a waveform of the source signal (lighter), the processed darker one (lower right). The difference being, is the filtering of the background noise level, is clearly seen.

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Functional Overview

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STC is a leading speech and signal technology developer. It has an extensive portfolio of proprietary know-how and a number of ready-made products in the field of modern speech technology, especially for speech enhancement and voice extraction. Contact us and we will try to solve any problem in the speech or signaling area.

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Clear Voice processes sound signals in digital PCM 16 bit format and removes automatically additive noise from transmitted (live) or pre-recorded signals with minimal reduction in signal quality.

◆ Uses only single input, for example, hands-free car microphone

◆ Automatically separates useful signal (like speech) from background slow varying noise

◆ Programmable noise reduction parameters

◆ Up to 30 dB signal-to-noise improvement

◆ Single tone reduction > 50 dB

◆ White noise reduction > 15-20 dB

◆ Hiss and rumble additional filters, frequency response forming filter

◆ The procedure is self-adjusting but the controls of the Clear Voice give to the advanced user an opportunity to choose the best degree of noise reduction and to tune the method for a specific task.

◆ **Denoiser** is designed specifically to cancel slow varying in amplitude and frequency broadband noise such as, for example, office noise, street noise, car noise, hiss and colored white noise in sum with narrow band tones such as hum in communication channels, noise of home and industrial equipment, slow music etc.

◆ **Declicker** removes from the input signal pulse-like interferences such as pikes, clicks, cracks, etc. It gives very good results from the removal of clicks from old vinyl records and digital clicks or static discharge cracks from DAT masters. It can even mask long duration tape drop-outs.

◆ **Denoiser-by-Reference** enables the user to reduce an arbitrary broadband stable noise in audio signals (tape hiss, surface noise of vinyl records, concert hall acoustic noise, etc.). It is developed mainly for the purpose of audio signal quality improvement in audio archives processing and CD mastering.

◆ The algorithms can be incorporated into any PC 16/32 bit Windows 95/98/NT application which processes or uses voice or any sound signal.

◆ STC can license the right to manufacture, use and sell products incorporating Clear Voice algorithms.

◆ Clear Voice may be licensed for use in software, hardware or integrated circuits (ICs) for communication applications. The form of the transfer may include software for PC or DSP, DLL, source code, hardware, devices, etc.

◆ PC Windows version demands 17% on 133MHz Pentium and 100 KB internal RAM. May be easily imported to fixed point or floating point DSPs.

◆ Also available

- Noise Cancellation DSP board

- Denoiser TI eXpress DSP compliant algorithm

- Denoiser ActiveX control

Declicker sample software screenshot. Each SDK has two kinds of settings - universal (degrees of noise cancellation - hard ....soft) and advanced (fine tuning of all algorithm parameters).