



Expertise in Digital Voice Processing
Suite of innovative voice software for Voice Tech

- ▶ Real Time Voice Imitation (unique in the world)
- ▶ Noise Filter
- ▶ Voice Transformation



Come and visit us for a live demo of

- ▶ Real Time Voice Imitation
- ▶ Performances of our Muvoc Noise Filter

Our Host Partner : BNP Paribas - Lab

Stand : F36-006

Presence : Wednesday, Thursday, Friday



See our flyers below

- Muvoc® Voice Imitation
- Muvoc® Noise Filter

Profile

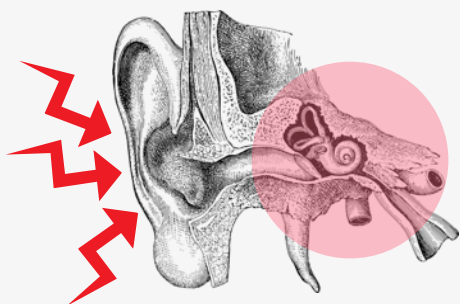
Sector: Voice Tech
Service: Noise cancelling
Expertise: Digital Voice Processing
25 years of R & D
Staff: 4 people
Creation date: 2015
Headquarters: Strasbourg

Patented technology

Europe, United States

Advancement

API, SDK
Web application
POC
Astersk Module
Muvoc® Noise Filter is used for
15 years in radio systems for
sports referees worldwide



Optimal protection against:

- ▶ Acoustic incidents
- ▶ Acute sound trauma
- ▶ Acoustic shock syndrome
- ▶ Acoustic stress
- ▶ Hearing fatigue



▶ MUVOC® NOISE FILTER

Value proposition

Movoc Noise Filter preserves hearing health of teleoperators, increases the productivity, improves customer experience and brand's image.

Problem

Ambient noise

- ▶ Degrades the quality of telecommunications (listening and understanding)
- ▶ Endangers the hearing health of teleoperators
- ▶ Decreases the productivity
- ▶ Degrades the customer experience and brand image

Solution

- ▶ Removes all ambient noise for inbound and outbound communications
- ▶ Maintains the natural aspect of the voice
- ▶ Facilitates speaker recognition
- ▶ Improves speech recognition

User benefits

- ▶ Improves the intelligibility of exchanges (listening & understanding)
- ▶ Improves the performance, quality and comfort of communications
- ▶ Contributes to the primary prevention against exposure to ambient noise (strategic issue for hearing health)
- ▶ Controlled signal level protects against the acute acoustic trauma & acoustic shock syndrome
- ▶ Reduces hearing fatigue caused by acoustic stress
- ▶ Promotes well-being and comfort of users

Competitive advantages

- ▶ Differentiates voice from ambient noise
- ▶ Enhances voice quality and preserves its natural appearance
- ▶ Provides a controlled signal level (avoids sound peaks)
- ▶ Reduces quantization of vocoders used in VoIP and makes quantized voice more natural
- ▶ Active only in the presence of background noise

Technical Specifications

- ▶ One mic filter
- ▶ Compatible with any system and any hardware
- ▶ No speech synthesis required
- ▶ Noise reduction: > 36 dB / Mute
- ▶ Low power: 80 MIPS DSP (16-bit integer) at 8 kHz
- ▶ Uses 6% of CPU / ARM: 2.4 GHz / sample rate: 16 kHz
- ▶ Sampling frequencies: 8 kHz, 16 kHz, 32 kHz
- ▶ Delay: 36 ms (imperceptible to the user)
- ▶ Gain of about 10 dB on the MOS curve
- ▶ C-integer and C-scalable to be implemented on any type of processor
- ▶ Can filter 170 channels on a single Intel server core at 8kHz sample rate

Profile

Sector: Voice Tech
Service: Text-To-Speech voice customization
Expertise: Digital Voice Processing
25 years of R & D
Staff: 4 people
Creation date: 2015
Headquarters: Strasbourg

Patented technology

Europe, United States

Advancement

API, SDK
Web application
SAPI5
POC
Clients



Markets and uses

- ▶ TTS customization
- ▶ Health
- ▶ Telco
- ▶ Massively Multiplayer Online Role-Playing Games
- ▶ Entertainment
- ▶ Vocal corpora
- ▶ Robotics
- ▶ Dubbing
- ▶ Personal avatars
- ▶ PC's voice customization via SAPI5

▶ MUVOC® VOICE IMITATION

Value proposition

Voice Design tool to create, customize and manage your voices.

Problem

- ▶ Brand Voices vs Voice Customization
- ▶ Generic, impersonal TTS voices
- ▶ Complexity of personalized TTS building:
- ▶ Large number of sentences to record
- ▶ Complexity of the voice model building process
- ▶ High computing power / GPU cards cost
- ▶ Technology accessible only to professionals
- ▶ High cost

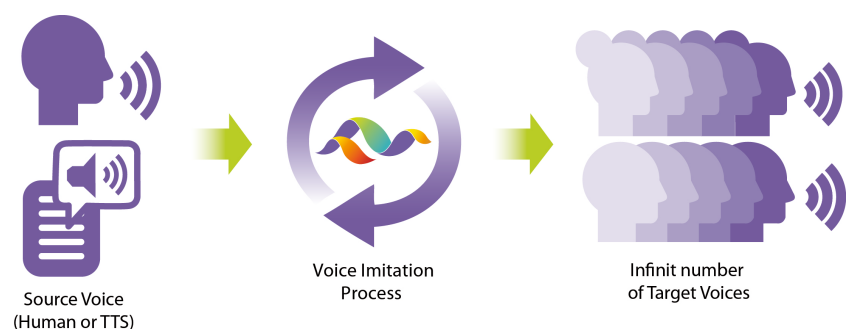
Solution

- ▶ Gamification of voice products & services
- ▶ Voice customization to a Target Voice
- ▶ Voice model from archived audio files
- ▶ Small number of sentences or words to record
- ▶ Easy & fast voice model building
- ▶ Now available in French, English, German, Italian

Innovation / Differentiation

- ▶ Technology unique in the world
- ▶ Any market TTS's generic voice customization
- ▶ 20 to 40 x fewer records than existing solutions
- ▶ Voice cloning from sentences or simple words recording
- ▶ Easy & fast voice model building process
- ▶ Small computing power / small processors
- ▶ Method suitable for all languages
- ▶ Works in Real-Time

Simplified diagram of voice imitation



- ▶ Watch the Real-Time Voice Imitation demo on this scientific show, Xenius on Arte:

https://1drv.ms/v/s!AsAtZy--8LuCgtB_BigADkbGy_CrcQ

If you don't want to watch the whole show, here are the sequences we are talking about our techno:

- ▶ from the start at 4.35
- ▶ from 8.45 to 12.00
- ▶ from 13.58 to 21.25
- ▶ from 25.00 to 26.00