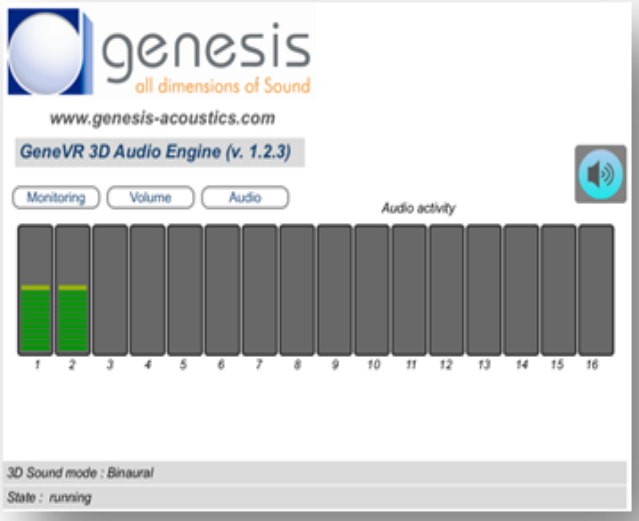
geneVR

Real-time 3D Sound For Virtual Reality



GeneVR is a software tool for the real-time playback and spatialization of sound sources.

It allows the creation of sound scenes in virtual reality platforms and simulators in interaction with the user and contributes to the improvement of the simulation realism and immersion.

geneVR features

- Real-time playback and spatialization of sound sources
- Playback of 3D ambient sound scenes
- Four different sets of HRTF to better tailor treatment spatialization to the listener
- Ability to use a head-tracking device
- Creation and playback of user-defined 3D sound scenarios

geneVR is designed to be controlled:

- Manually from a PC user interface
- Through control messages from a simulation and virtual reality platforms using a dedicated communication protocol

GeneVR includes the following 3D reproduction modes:

- 3D rendering over headphones with binaural technology. A head-tracking device may be used to compensate for the listener's movements, giving the virtual sources an absolute position in space
- 3D rendering over 2 or 4 loudspeakers using Genesis' transaural technology
- 3D rendering over a large number of loudspeakers using Vector Base Amplitude Panning (VBAP) technology

Applications

- **Virtual reality platforms**
- **Driving and flight simulators**

geneVR (**Gene**sis **V**irtual **R**eality) is an advanced software solution for the creation and playback of spatialized audio scenes for Virtual Reality platforms. 3D real-time processing allows for 3D audio rendering of each sound source.

geneVR comes with a user interface for positioning and steering of sound sources and for creating sound scenarios.

3D Sound Technology

A set of several techniques and innovative algorithms is processed to give sounds a 3-dimensional perception around the listener with headphones or loudspeakers.

genesis
all dimensions of Sound

GENESIS
audio simulators

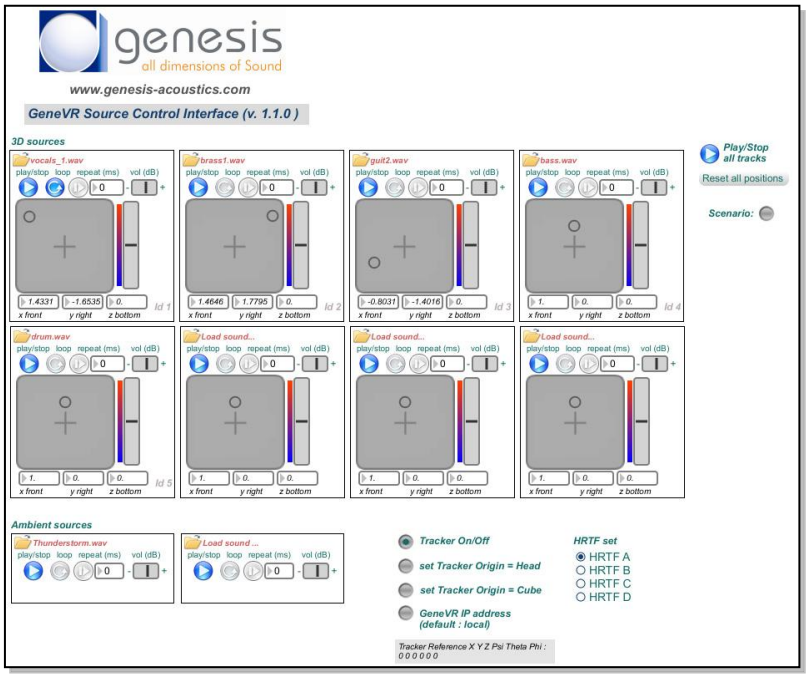
GENESIS is a high-technology company whose core business is high-performance 3D audio simulators and sound quality tools & expertise.

GENESIS real-time audio simulators are used for industrial or military applications that require a realistic and interactive soundscape with an accurate sound reproduction.

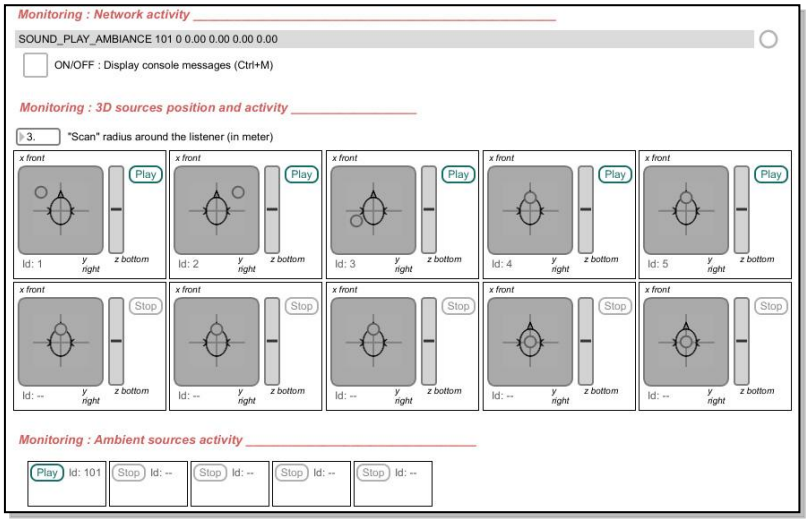
Examples include:

- Virtual reality platforms
- Training simulators: helicopter flight simulators, car simulators, training facilities for sonar operators, etc.
- Simulators for research and study purposes: car simulators for multisensory analysis tests, virtual aeroplane cockpit to study ergonomy, train coach simulation tool for studying passenger audio comfort, etc.

The GENESIS know-how is based on over 10 years of experience with major simulators built for industry and defense:
RENAULT, PSA, DCNS, AIRBUS, SNCF, EUROCOPTER, etc.



GeneVR Source Control Interface



GeneVR network and source activity and position monitoring

GeneVR is driven by a simple Ethernet protocol, following the basic sound life cycle:

1. Creation of a sound source from a WAV file and a position in the virtual space
2. Play on / off of the sound source
3. Update the position of the source in the virtual space
4. Update the position of the listener in the virtual space
5. Stop the sound source

Product information

OS Compatibility: Windows XP 32/64 bit, Windows 7 32/64 bit

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