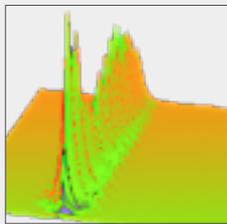


neosonic

automotive audio design



Sound Signatures

Elvis³ sharply defines your vehicle's brand content and offers a comprehensive toolchain to support the creation of maximum emotion with minimum effort.



Sound Synthesis

Elvis³ seamlessly integrates the vehicles' natural sounds with those it generates from a rich set of driving parameters in real time.



Quiet electric vehicles

imply new risks, which can be effectively handled, thanks to **Elvis³**. The vehicles' quietness opens up vast spaces for exciting brand sound personalities.

elvis³

ELaborate Vehicle Integrated Sound Synthesis System

Features

Elvis³ is a highly effective development environment specifically tailored for brand-specific sounds in electric, hybrid, and combustion vehicles.

The system conceived and delivered by neosonic Germany generates the audio personality of your vehicle – depending on the current driving conditions like speed, load, or driving program.

Due to its open architecture we can efficiently develop an extremely broad palette of dynamic audio personalities, ranging from the natural sounding support of combustion engines with the **CESAR** module to smooth elegant synthetic sounds with **Elvis³ E-Motion**. The additional modules **CASE** and **PANC** allow us to create brand-specific enhancements of the car's component sounds as well as to automatically suppress annoying noises.

Elvis³ renders the sound signatures both to the exterior environment and – in a specially adapted version – to the interior.

Function

During setup the natural sounds generated by the vehicle's electric motors, gear box, pumps, tires, or combustion engines are easily integrated into **Elvis³** with a few clicks.

New sound signatures are defined in a lab-based simulator which also allows reproducible testing procedures according to CAN data streams recorded from the vehicle. In the second step the signatures can be driven in a demonstrator vehicle for assessment and evaluation under 1:1 real-world conditions. The sound is generated either on a notebook or on a small automotive hardware unit. An editor software allows the optimization in the vehicle while on the road.

Elvis³ is working in real-time. All adjustments are immediately rendered without latency. Its powerful audio engine together with the user interface allow for a highly effective workflow. Tedious tuning loops without any sonic feedback are finally a thing of the past.

Safety

Waterproof speakers hidden behind the motor grill or elsewhere warn pedestrians and the visually impaired when electric, hybrid, or effectively silenced combustion-engine vehicles are approaching. Pending laws requiring outdoor sounds for electric vehicles driven at slow and medium speeds can thus be fulfilled with minimum effort.

Thanks to its flexible architecture, **Elvis³** E-motion can easily output your exterior and interior sound signature in any speaker format, even using actuators or, if need be, in true surround!

By means of its high-quality sound signature your vehicle communicates its emotional personality in a clear and concise way.

There are virtually no limits as to which audio personalities **Elvis³** can create. Our interactive approach turns your vehicle into a strong and immediately convincing agent for the emotional values of your brand!

Contact us for a live demonstration!

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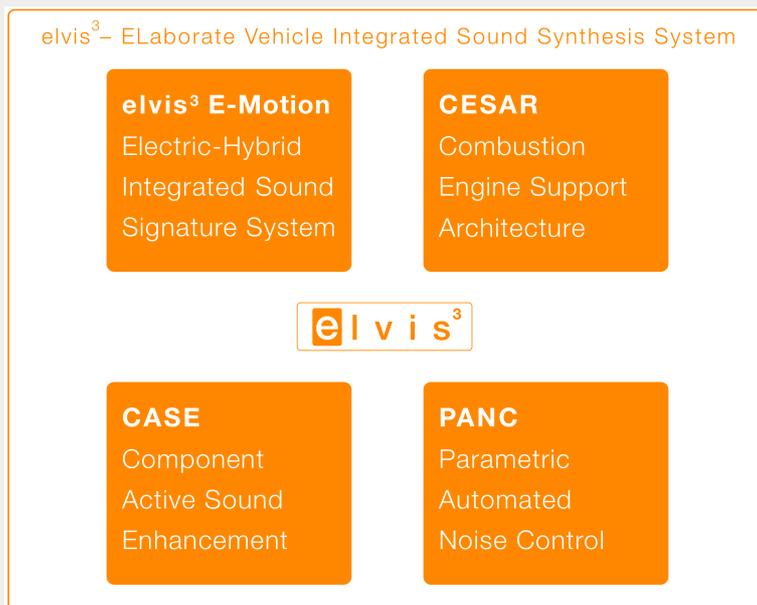
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Elvis³ System Architecture



Elvis³ Head Unit Hardware

The **Elvis³** hardware kit is a building block system for creating head units meeting automotive standards. According to your specification, we prepare and configure the layout.

Due to the well thought-out design of the building blocks, your imagination (and the sky) is the limit.

Profile

neosonic has more than 20 years of experience in designing, creating, and delivering the right sound for your product.

In addition we conceive and implement complex interactive audio software and hardware systems to realize these brand-specific sounds and audio designs within the automotive industry.

Our competencies encompass the entire audio field. They include defining customer expectations, sound perception, physical sound analysis as well as technical and artistic realization of our audio concepts. This is also including project management for quality results within scope, time, and budget.

Your contacts

Dr. Markus Bodden
Torsten Belschner M.A.

Scalability

Our **Elvis³** hardware kit scales flexibly with your demands. It permits the construction of high performance head units with many processing kernels working in parallel, and also the realization of designs equipped with but a minimum of calculation horsepower to maximize cost-efficiency.

Services

Production

- ▶ Development of complex interactive audio systems + audio brands
- ▶ Specification + development of automotive head units
- ▶ Specification + development of automotive audio software

Product Sound

- ▶ Sound Design & Sound Quality
- ▶ Applied psychoacoustics
- ▶ Identification and elimination of sound problems

Methods

- ▶ Development of specific signal processing chains
- ▶ Development of tools to objectively assess sound perception
- ▶ Project management according to the internationally acclaimed PMI standard

Components (selection)

- ▶ DSP, Micro Controller
- ▶ MCU
- ▶ internal / external flash memory
- ▶ CAN, JTAG interfacing
- ▶ AD- / DA-converters
- ▶ Watchdogs
- ▶ Class-D amplification
- ▶ Inside / outside loudspeakers
- ▶ Actuators

Innovation

We are highly involved in contemporary sound research. Over the past years we have presented more than 80 papers in scientific journals and congress sessions.

Since 1994 neosonic has been active in the international event arena with its innovative sound designs and media installations. Our productions have been exhibited on all continents. So far.

Our virtues are creativity, know-how, the will to push the boundary and break new ground together with our customers, as well as the necessary endurance.

For you we tailor innovative solutions suiting you, your brand and your product. Give it a spin!