

The New HEAD acoustics VoCAS: The Benchmark is Real Life

HERZOGENRATH – February 04, 2022. *HEAD acoustics continues to innovate the field of speech and communication quality with VoCAS, a sophisticated tool for testing and evaluating the performance of automatic speech recognizers.*

The benefit of smart virtual assistants and their acceptance by the users depend on how well they recognize spoken commands and respond to them in real-life environments – and the basis for good performance is the automatic speech recognizer. VoCAS from HEAD acoustics reveals speech recognizer performance with unprecedented ease and accuracy.

VoCAS brings reality to the lab

The VoCAS software objectively tests and evaluates speech recognition performance in the smart home, vehicle, or smartphone - to name just a few - in an environment realistic for each respective application. It is part of HEAD acoustics' sophisticated measuring and playback framework that mimics real-life situations as closely as possible, incorporating critical factors in measuring speech recognizer quality with a so far unknown scope: VoCAS considers the acoustic environment, background noise, different talkers, different languages, and even accents. Because attention to detail means attention to variation. This true-to-life diligence also involves using HEAD acoustics' HMS artificial heads. They are equipped with an artificial mouth using specially developed loudspeakers simulating the human mouth sound field, and VoCAS allows the precise individual calibration of each artificial mouth.

The mimicry of the natural voice transmission path is the only way to ensure a realistic human voice sound field generation. With VoCAS' customizable and reproducible test sequences adapted to the respective application, users gain essential information to optimize and validate the speech recognition performance.

Up to four simultaneous talker positions – even in noisy, reverberant environments

With the hardware platform [labCORE](#), VoCAS now enables complex test scenarios with up to four talkers simultaneously, automated and calibrated speech recordings, and a simulation of different room environments and noise conditions. This makes VoCAS ideally suited for benchmarking various acoustical device interfaces in conjunction with speech recognition systems. Of course, VoCAS allows you to import your existing speech material and cut, filter, and adjust audio files to defined speech levels.

Automation for highest efficiency and ease

VoCAS makes it easy for users to realize the software's and its ecosystem's full potential. For example, its extensive test automation includes user-programmable test sequences, fully automatic equalization, automated evaluation, and the statistical analysis of detection and error rates.

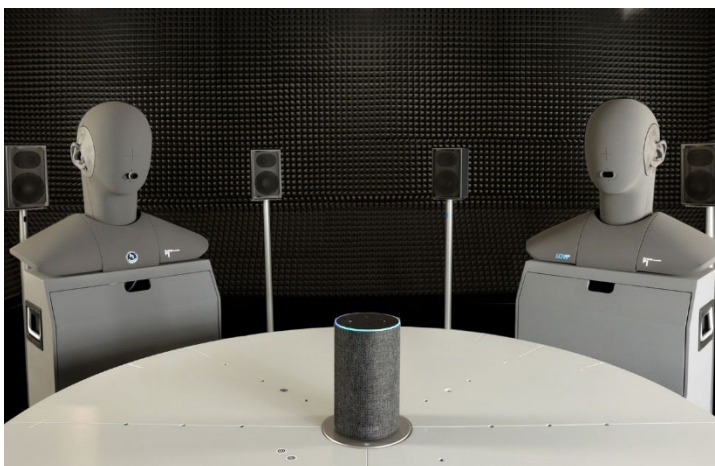
VoCAS highlights at a glance

- VoCAS is a database application that integrates into a comprehensive setup for the synchronized and calibrated playback of speech and spatially recorded data.
- VoCAS tests and evaluates any speech recognition system systematically and under realistic, reproducible conditions.
- VoCAS enables automated, complex, and realistic test scenarios with up to four talkers, background noise, and reverberation & echo.
- VoCAS is ideally suited for optimizing and benchmarking devices employing or connected to speech recognition systems.

Find out more about the unique HEAD acoustics VoCAS Speech Recognizer Test software and visit [VoCAS - Evaluate Voice Recognition Systems | HEAD acoustics \(head-acoustics.com\)](https://www.head-acoustics.com/VoCAS-Evaluate-Voice-Recognition-Systems)!

About HEAD acoustics

HEAD acoustics GmbH is one of the world's leading companies offering holistic solutions for sound and vibration analysis. In the telecom sector, the company enjoys global recognition due to the expertise and pioneering role in the development of hardware and software for the measurement, analysis and optimization of voice and audio quality as well as customer-specific solutions and services. HEAD acoustics' range of services covers sound engineering for technical products, investigation of environmental noise, speech quality engineering as well as consulting, training and support. The medium-sized company from Herzogenrath near Aachen in Germany has subsidiaries in China, France, Italy, Japan, South Korea, the UK and the USA as well as numerous sales partners worldwide.



VoCAS Testscenario