

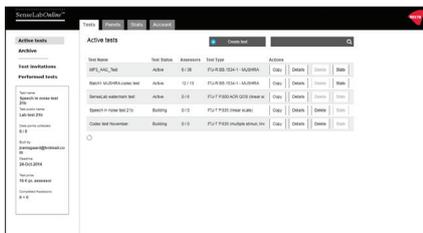
# SenseLabOnline

*Web application for listening tests*

SenseLabOnline is a web application that functions as a complete listening test facility.

SenseLabOnline handles all steps included in performing a best-practise listening test:

- Experimental design and randomisation
- Administration of tests
- Managing multiple listening panels
- Access to external expert listening panels or consumers
- Presentation of test stimuli and gathering of data
- Automatic statistical analysis



*Build and administer any type of listening test in SenseLabOnline.*

Once you have registered as a user of SenseLabOnline you can sign in and build

a range of standard compliant, as well as custom listening tests.

## **In-house tool for any industry**

SenseLabOnline will serve as an in-house tool for facilitating listening tests.

Because the system is built to run in a browser you can distribute a listening test across physical locations - even to departments in other countries.

All data transformation is done in Secure Socket Layer (SSL), and the application is approved with industry standard code signing certificates. The server is hosted on professional solutions with 24 bit encryption.

Currently SenseLabOnline serves a number of clients within:

- Telecommunications
- Audio coding
- Hearing aid industry
- Automotive industry
- Consumer products (product sound quality)
- Sound/audio branding agencies

## **Access to listeners when needed**

In SenseLabOnline you can build and maintain your own panels of listeners. In addition you can administer multiple listening test running simultaneously. If you are not interested in maintaining your own panels of listeners, you can easily request listeners from the SenseLab listening panels to perform your listening tests.

SenseLab has a well-maintained expert listening panel, a panel of hearing aid users (N3), as well as access to larger groups of consumers (i.e. naïve listeners).

This means that you, with SenseLabOnline, can deliver a complete report within as little as 48 hours after building your test.

If you are interested in running listening tests in other countries, SenseLab can help you recruit listeners and setup the test in trusted labs across the world.

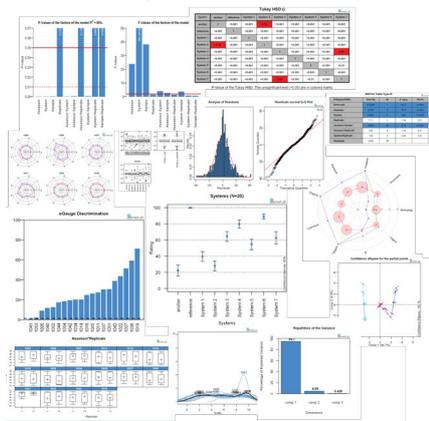
## **Automatic statistical analysis**

SenseLabOnline has implemented automatic statistical analysis procedures.

Any time during a test you can get an instant and full statistical analysis of the preliminary results.

The automatic routines check data quality and basic assumptions before proceeding to plotting of the results.

Basic analysis methods like 2-way Analysis of Variance (ANOVA), showing mean values with confidence intervals, plotting of interaction between experimental variables (etc.) are always included.



*SenseLabOnline provides you with automatic statistical analysis of your listening tests.*

For more advanced test types e.g. tests with multiple test questions/attributes, you will get a complete overview of the results using multivariate data analysis methods such as Principal Component Analysis (PCA), and Hierarchical Multiple Factorial Analysis (HMFA).

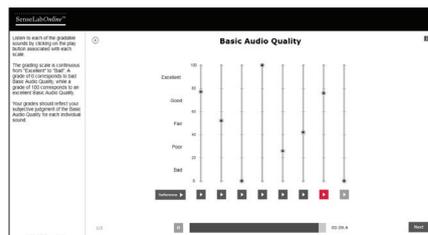
You will receive the results as jpg files, and have access to raw data files for all your experiments.

### Any test type/methodology

Virtually any type of listening test can be performed using SenseLabOnline. When you register as a client you will get a start package that includes the following test types:

- ITU-R BS.1116-3
- ITU-R BS.1534-2 (MUSHRA)
- ITU-T P.835
- ITU-T P.800 ACR/CCR/DCR
- Triangle test (ISO 4120)
- Pairwise comparison (ISO 5495)
- ABX/Duo-trio test (ISO 10399)
- Adapted sensory evaluation methodologies (attribute testing)
- Annoyance test
- Suitability test
- Check-all-that-apply (CATA)

If you are interested in more advanced test types or custom versions of known methodologies this is easily achievable. Just contact the SenseLab team with your specifications and you will have a template ready within a short time.



*The SenseLabOnline implementation of the ITU-R BS.1534-2 methodology.*

In SenseLabOnline you can test up to 24 systems (codecs, algorithms, etc.) in 8 different conditions (e.g. background noise scenarios, SNR etc.) with 24 different samples (source material). However, we always recommend staying within the normal recommendations regarding test duration to avoid listener fatigue.

### Technical details

The sound player used in SenseLabOnline has been developed exclusively to meet the high performance criteria specified in the international standards for audio evaluation testing.

- Wav format only
- 16 bit
- 8 – 96 kHz
- 40 ms crossfade or 5 ms out/in fading
- Runs directly in your browser

As well as meeting high performance criteria the sound player runs exclusively via your web browser, meaning that no additional programs need to be installed in order to build or run tests

### System requirements

- Microsoft Silverlight browser plugin
- Mac OS X: Safari (latest version),
- Windows 32/64 bit (XP, Vista, 7 and 8): Internet Explorer (7, 8, 9, 10, 11), Firefox (latest version)
- Recommended minimum screen resolution 1280x800
- Minimum 2 GB ram

### Contact

SenseLab  
senselab@delta.dk  
madebydelta.senselab.com  
+45 72 19 46 10

### DELTA

Venlighedsvej 4  
2970 Hørsholm  
Denmark  
Tel. +45 72 19 40 00  
delta@delta.dk  
madebydelta.com

