

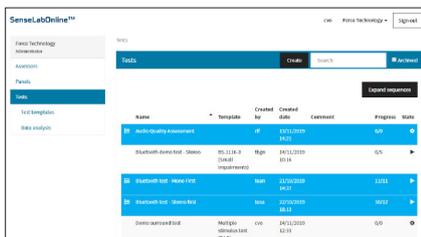
# SenseLabOnline

## Web application for listening tests

SenseLabOnline 4 is a web application that functions as a complete listening test facility.

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

- Choosing among a wide variety of test methods, ITU- or ISO compliant or custom.
- Experimental design and randomisation
- Administration of tests
- Managing multiple listening panels
- Presentation of test stimuli and gathering of data
- Automatic statistical analysis



Name	Created By	Created Date	Created	Created	Progress	State
Acoustic Quality Assessment	IP	14/11/2019	14/11/2019	14/11/2019	100%	OK
Bluetooth device test - Stereo	IP	15/11/19	15/11/2019	15/11/2019	0%	OK
Bluetooth test - Stereo	IP	15/11/19	15/11/2019	15/11/2019	0%	OK
Bluetooth test - Stereo	IP	15/11/19	15/11/2019	15/11/2019	0%	OK
Bluetooth test - Stereo	IP	15/11/19	15/11/2019	15/11/2019	0%	OK

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 of all types and

size, from small informal tests among colleagues, over highly controlled tests, to large online studies for everyone with the test link (no registration needed!)

### 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 communication is performed via secure protocols and data saved on a secure in

house FORCE Technology server.

### 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 request listeners from the SenseLab listening panels to perform your listening tests.

SenseLab has a well-maintained expert listening panel, two panels of hearing aid

users (N3) and a mild hearing loss panel for testing hearables, as well as access to larger groups of consumers (i.e. naive listeners).

This means that with SenseLabOnline, you can get the answers you need without having to recruit, train and perform your test, while still doing the data analysis yourself and keep all corporate secrets in-house for sensitive projects.

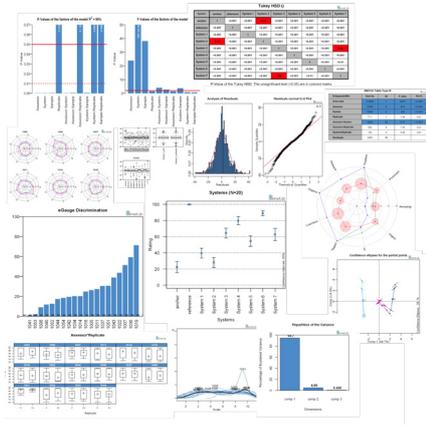
If you are interested in running listening tests in other countries, SenseLab can help you recruit listeners and setup the test in trusted labs across the world.

### 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).

The suite of statistical options also includes assessor performance evaluation (eGauge, described in ITU-R BS.2300-0).

You will receive the results as image files, and have access to raw data files for all your experiments for further in-depth analysis.

### 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:

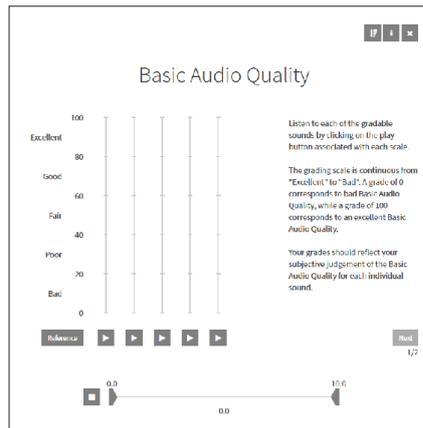
- ITU-R BS.1116-3 (Small differences)
- ITU-R BS.1534-3 (MUSHRA)

## SenseLab

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- 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)
- Attribute tests
- Annoyance test
- Suitability test
- Check-all-that-apply (CATA)



The SenseLabOnline implementation of the ITU-R BS.1534-3 methodology.

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

Building a standard test in SenseLabOnline can be done in less than 10 minutes: Choose a predefined template, e.g. a MUSHRA test, input the systems (codecs/algorithms/products, etc.) the samples (source material/musical excerpts), and the conditions (background noise, SNR etc.), upload audio files, invite your test subjects and the test is ready! All test standard templates have suggested instructions and are setup to strictly follow the standard it is made for, but can be customized for special uses.

### 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.

- We recommend wav format, but SenseLabOnline 4 works with many other common formats
- 16-32 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

- Mac OS X: Safari (latest version),
- Windows 32/64 bit (7 and 10): Chrome (latest version),
- Recommended minimum screen resolution 1280x800
- Minimum 2 GB ram
- Can run on a iPad.

### CONTACT

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