

## DELTA SenseLab

### *Measuring product perception*

DELTA is a company with a uniquely practical determination to help you get advanced technologies working exactly as intended, and bring them to market quickly and efficiently.

SenseLab is a department within DELTA focusing on perceptual evaluation of audio, visual and haptic/tactile stimuli. In testing we apply both well-known test types from various standards, as well as novel methods from the field of sensory evaluation.

SenseLab's domain experience includes (but is not limited to):

- Evaluation of speech/audio codec, noise suppression technologies, telecommunication systems, hearing aids, watermarking technologies, spatial sound systems etc.
- Evaluation of Environmental noise and Noise annoyance
- Evaluation and optimization of Product Sound Quality
- Evaluation of mobile visual displays and button feedback/design

#### **Perceptual evaluation as part of product development**

Our aim is to make perceptual evaluation a natural part of hi-tech product development. In this way we help our customers develop products that are easier and more pleasant to use because they are customised to end-users' senses.

#### **Knowledge and experience**

SenseLab is at the heart of a dynamic, innovative working environment, sharing knowledge and insights with some of the world's leading experts in acoustics, psychoacoustics, micro acoustics, optics, lighting and micro-electronics.

DELTA SenseLab is a member of the European Sensory Network, ITU, and ETSI. This gives us an international network of serious and recognised collaborating partners, as well as access to laboratories across the world.

Through our close collaboration with industry leaders and universities SenseLab continuously contributes to the academic development in the field of perceptual audio evaluation.

#### **SenseLab facilities**

SenseLab has facilities and expertise to carry out a broad spectrum of listening tests and sensory evaluation of hi-tech products that appeal to end-users' hearing, vision and touch.

We have state of the art facilities that include a standardized listening room (ITU-R BS.1116-3), listening booths (NR10), and anechoic chambers.



*Our standard compliant listening room.*

#### **Listening panels**

SenseLab's services include our skilled and well-maintained expert assessor panel, a selected panel of hearing aid users (N3), and access to larger groups of consumers.

## Listening test services

SenseLab is highly qualified in the field of doing listening tests, starting from setting up experiment, to collecting data and analysing results.

SenseLab offers standard compliant listening tests like:

ITU-T P.800 (ACR, DCR, CCR)

ITU-T P.806

ITU-T P.835

ITU-R BS.1534-2 (MUSHRA)

ITU-R BS.1116-3

Etc.

## Consumer listening tests

Consumer studies are the first and most common step in sound and visual quality evaluation and can provide rapid information to you regarding technology selections.

Consumer testing is used for R&D as well as substantiating marketing claims regarding your products perceived quality.

SenseLab offers consumer testing in all regions of the world, setup in collaboration with trusted partners.

## Sensory evaluation

Sensory evaluation, or Descriptive Sensory Analysis, is a strong selection of methods for describing products and differences between products.

The main idea in sensory evaluation is to, as objectively as possible, measure product characteristics using human assessors on a range of relevant attributes. Sensory evaluation may also include consumer data to further explore factors driving product preference.

## Consultancy and workshops

SenseLab provides consultancy services for those who want to set up their own

listening/viewing facilities, expert panel, consumer panel, etc.

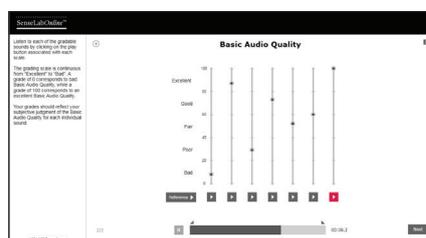
In addition SenseLab offers structured workshops to facilitate learning in the domains of audio perception, listening test methodologies, statistics, and experimental practices.

## SenseLabOnline

SenseLabOnline is a web application developed by SenseLab.

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

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



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

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.

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

## Contact

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