Usability Lab

How to build a Usability Lab?

REQUIREMENTS PHASE

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To get off to a good start, it is best to describe the research or tests that are going to be performed in great detail. With this description it becomes clear what kind of equipment will be needed, and which physical environment would best suit this test or research. The description should answer questions such as:

- How many participants need to be recorded at the same time?
- How many people are present during a test, besides the participant(s)?
- Are participants being invited to visit the lab? Is on-site research going to be performed? Or both?
- Where and in which room(s) should the lab be built? How big are the rooms? And, does the building have special aspects (i.e. is it a monument)?
- How many video streams need to be recorded simultaneously? Many usability labs use multiple video streams that are recorded in sync, and there are labs that use one video stream that consists of a mixed image.

Furthermore, how many rooms are available? A one-room usability lab can be used, but it is more common to build a two-room usability lab (with a one-way mirror). Most tests can be performed in a two-room usability lab.

CHOOSING EQUIPMENT AND SERVICES

Below you can find lists of equipment you can think about when building a Usability lab. Of course, the exact combination of tools used in your lab depends on your wishes and requirements. Noldus' consultants and engineers are ready to assist you.

USER ROOM EQUIPMENT

- Dome cameras
- Webcam
- Microphone
- Speakers
- Telephone
- Participants' PC
- Eye tracker

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OBSERVATION ROOM EQUIPMENT

- **The Observer XT** – the ideal integration platform
- **FaceReader** – facial expression analysis software
- **MediaRecorder** – professional recording software
- **Viso** - easy-to-use solution for creating A/V recordings
- PCs
- Monitors
- Speakers, headphones, microphones
- Internet connection

OTHER ITEMS THAT ARE NECESSARY IN THE LAB

- **Tables for putting the monitors on.** These can range from simple straight-forward tables to custom prepared PC or monitor tables.
- **Chairs, closets/cabinets for storage.** A refrigerator in an adjacent room could provide the necessary refreshments.

We can provide any combination of services: you decide what you need. Our consulting services will enable you to quickly take advantage of the many benefits that Noldus' systems and software provide. We can assist and advise you during the design of your research, by coding your observations, in the set-up of your lab to obtain the results that you are after, and in training your staff. If you have a very complex coding scheme and are looking for a suitable configuration or if you are struggling to get the analysis output in a particular format, we can help you there too, saving you a lot of time and energy at a later stage!

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PERFORMING USABILITY TESTS

There are many descriptions of how to perform a usability test. Of course it differs per product. Usability labs seem to be preferred over portable labs. But, when choosing participants (for example elderly people living in nursing homes), a portable usability lab is preferred over a stationary usability lab.

One possible scenario of a usability test is described here, which is followed by many large companies.

SOFTWARE APPLICATION TEST IN A NUTSHELL

The test leader receives the product to be tested from the client (internal or external), installs it on the test computer (assuming the product is software), and both the test leader and the logger explore the software.

- On the test day, the participants are welcomed and asked to wait in the waiting room. Then the test leader welcomes them in and explains the purpose and procedure of the test. The participant is asked to sign a consent form for the video recordings in the context of the study, and is asked to complete a pre-test questionnaire.

- Test leader and logger(s) observe the test through the one-way mirror, on secondary monitors (copying the test computer's display) or on a large screen or projected image. In some cases, the test leader stays in the User room and asks questions during the test.

- After all participants have completed the test, the test leader prepares the report. A debriefing can be organized to discuss the test results. The test leader reviews the event log, makes a video play list, and generates video clips using the video highlights function in The Observer XT software. If productivity aspects are important, a quantitative analysis on frequency and duration of observed events is done, to compute usability metrics. The test leader produces the report (either in the form of a Word document, PowerPoint presentation or HTML pages), embeds video clips, and presents it to the client.

Feel free to contact us or one of our local representatives for references, client lists, or more detailed information about usability testing, usability labs, soft- ware, services, and rental possibilities.

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