

Exercise 8 – Mensch-Maschine-Interaktion 1

General Task Description

Based on your findings from the heuristic evaluation, design a user study for either the set-top-box (groups with even numbers) or the open source applications (groups with odd numbers). Write a design document in which the following aspects are described:

- State the goals of the user study (compare the two systems)
- Formulate hypotheses (e.g. “In system1 ... is faster to reach than in system2”)
- Identify dependent and independent variables
- Formulate two or three free questions you like to ask the test persons
- Describe the experimental setup
- Plan the conduction of the study
- Explain how you will measure the dependent variables
- Specify participants, who, how many

The user studies should generate qualitative as well as quantitative data. While designing the study keep in mind that you should be able to conduct it with 4 – 6 people in less than two hours. In other words, the study should not take longer than 15 – 20 minutes per participant.

Run a pilot study to test your design. To do so, you can reserve time slots from January 22nd till 25th: <https://wiki.medien.ifi.lmu.de/Main/MMIEvaluationWS0708>. Also, reserve a time slot for conducting the study from January 28th till February 4th.

Submit your design in a written format. Make sure that your design document is complete and can be used for a user study.

User Study Design for Set Top Box

(Per-group homework, 1 week)

Design a user study to compare the quality of the two (user interface) designs of

- a. the set-top-box and
- b. the prototype.

Please keep in mind that the prototype works only in pre-defined ways. You should consider this in your user study design, e.g. define certain tasks, which will work on both systems.

User Study Design for the Open-Source Applications

In your previous assignment you have made yourself familiar with Dolphin and Okular. Now your task is to design a user study for each of the applications. Your group will operate in two sub-teams again (the same as last time). One team will design a user study for Okular, the other for Dolphin.

You will have to compare the usability of Dolphin with Konqueror (pre-KDE-4.0), and Okular's usability with Adobe Reader (for Linux). Konqueror in KDE 4.0 has many things in common with Dolphin, so you should compare Dolphin with Konqueror version 3.5.X. This version is currently only installed in the CIP pool. It will be available in the usability lab for the actual user studies.

We would suggest that you let the user conduct various tasks with both applications. Besides watching her and getting her feedback during the task you should also collect quantitative data. This would probably be *task completion time*, *error rate*, *amount of tasks completed*, or similar. Additionally you may have the user fill out a short questionnaire.

The developers of Dolphin and Okular are especially interested in the following usability aspects:

Dolphin	Okular
Drag'n'Drop into sub-folders	annotation feature
copy/move/link by Drag'n'Drop	highlighting passages
usability of Bread Crumb navigation	browsing in document
usability of column view	text search
usability of split view	copy&paste
adding Places by Drag'n'Drop	zooming
do users need tabs	

For Dolphin we would suggest testing Drag'n'Drop performance and asking users for their opinion on one or two other features. For Okular you should select two or three tasks. However, you are free to choose any other reasonable study design.

Submission:

- Submit your User Study Design to the UniWorx¹ system.
- Please use a zip file named exercise8-groupN.pdf (N is the number of your group).
The archive should contain a PDF file consisting of text and - where appropriate - images.
- The report must be written in English.
- Deadline for submission: **Tuesday, January 29th 2008, 12 a.m.**

1 <http://www.pst.ifi.lmu.de/uniworx/>