Human-Computer Interaction

Practical Class 3

Slides by Daniel Mendes for the Human-Computer Interaction course at Faculdade de Engenharia, Universidade do Porto, 2021, revised 2022

This Class

Discuss personas and activity scenarios

Continue user and task analysis

Simplified conceptual model

Functionalities and tasks

Usability requirements

Next Steps

Complete user and task analysis

Prepare report and presentation

Conceptual Model

Is

High level description of how the system is organized and works

Contains

Metaphors, concepts, relations between concepts, mappings

Is not

UI, users' mental model, systems architecture

Concepts

Concepts that are exposed to users

Objects

Attributes (of the objects)

Actions (on the objects, performed by users)

Relations between Objects

How each concept relates to each other

Two concepts per relation

Useful to identify

Shared actions

Classes and hierarchies

Different relevances / frequencies

Example Conceptual Model

Objects (attributes):

- photo (date, caption);
- photo set (title);
- event (local, date);
- person (name);
- archive (name, shared);
- user (name)

Actions:

- insert, remove, select photo;
- create, edit, remove caption;
- create, edit, remove event;
- create, edit, remove, share archive

Relations:

- archive has photos,
- photo set has photos,
- event has photos,
- user access shared archive,
- photo has persons,
- person can be in several photos

Functionalities and Tasks

Functionalities

What the system will allow users to do

Identify all, select 3 (with different complexities)

E.g.: select a music from a playlist

Functionalities and Tasks

Tasks

Specific, real and exemplificative, from the chosen functionalities (what, not how → no UI references!)

E.g.: choose the most played music from the current playlist

Usability Requirements

Used to evaluate the usability

Set of requirements per previously defined task

Should include efficacy, efficiency and satisfaction measures

Efficacy

Quality with which the user achieves the goals

E.g.: success rate, number of aids used, number of errors

Usability Requirements

Efficiency

Resources spent to achieve the objectives

E.g.: time, number of clicks, number of functions used

Satisfaction

Users' subjective reaction to the use of the system

Eg.: satisfaction scale, ease of use, ease of learning, fun

Example Usability Requirements

Efficacy

All users completed task, 90% made no more than 2 errors, ...

Efficiency

Average time under 3 minutes, 90% made less than 10 clicks, ...

Satisfaction

Less than 10% unsatisfied, 90% preferred our solution, ...

Until Next Class

Complete user and task analysis

Prepare report and presentation

Report / presentation structure available on Moodle

Next Class

Phase 1 Presentations

Max 10 minutes