Welcome!

Designworkshop II
What are we doing here?
User Experience Design

Technology

UX

Business

Design

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http://semanticstudios.com
User Experience Design

- useful
- usable
- valuable
- findable
- desirable
- accessible
- credible
Getting the right Design and the Design right...

Bill Buxton - Sketching User Experiences
User Study Design

• The Purpose of User Studies
• Research Methods and Experimental Design
• Ethical Considerations
• HCI-related and Practical Information for Your Own Studies
• Interpretation of Data and Presentation of Results


Front Stage
Double Diamond

DISCOVER  DEFINE  DESIGN  DELIVER

source: [8]
Double Diamond

Why? and How?

source: [8]
We focus on
Overview

Research  Innovate  Prototype

DISCOVER  DEFINE
Overview

Research

Get to know your problem/ subject
Gather insights about the user and their life
Collect artefacts & impressions
Record tasks
The diagram illustrates a four-quadrant model classifying users into four categories: frequent users, expert users, infrequent users, and novice users. The source of this model is [2,4].
BMW i8 Cockpit
infrequent users

novice users

frequent users

expert users

infrequent users

source: [2, 4]
BMW DTM Racing Cockpit

http://2.bp.blogspot.com/_5Mf9A_sejVGgM/3IX0N6i_WII/AAAAAAADwew/HorQgfputHg/s1600/Audi+R15+Plus+Cockpit.jpg
Different, usage contexts, user types and usage frequency will require dedicated solutions.
Overview

Make sense of your data
Identify important facets
Keep all players in mind
Collect and prioritise ideas
Develop & validate solutions
OVERVIEW

The Course
Approach

Tackling a real world architectural design challenge by:

- Applying an iterative design process in all phases from research to final prototype
- Working in teams
The Goal

A final presentation that includes milestone deliverables for each phase and a self-explanatory and functioning prototype* at the end of the semester.

*transportable, maximum size of a standard desk
Workshop Theme:

Escaping Flatland - Tools zur Gestaltung der Urbanen Zukunft
Standard Method: Scale Model
Grading

- Attendance of & participation in meetings
- 4 deliverables: in time, complete
- Strength of conceptual work (deliverables 1,2)
  
  Quality of research
  Is your concept solving the problem you framed?
  Is your concept merging hard- and software?
  Is it supporting ease of usability, conveying information, an emotional experience?
  How innovative is your concept?

- Strength of prototyping (deliverables 3,4)
  
  Does it make the idea experienceable?
  Does it work? Is it self-explanatory?

- Presentation
  
  How crisp could you bring your work across?
  Presentation skills, material
Milestones & Deliverables

NOW: Kick off

- May
- June
- July
- August
Milestones & Deliverables: Concept

12th June: 3 Storyboards - Decision

May  June  July  August
Milestones & Deliverables: Low-Fi Prototyping

03rd July: Low Fidelity Prototypes Presentation
Milestones & Deliverables: High-Fi Prototype

24th July Final Presentation
Until 15.05.17

Research: Problem Framing & Use Case

- Desk Research on interaction concepts & existing applications
- Analysis of current design practice
- Portfolio Wall as tangible output
Four different adjustments
just to make AC right the way you like it.

Too many buttons
Buttons could be simplified and grouped further.

AC adjustments
do not show up on navigation screen.

Turning Knob
for the screen on top is far back; Poor ergonomic.

What is working?
- Screen does not need to be at the same place as control.
- Tactile feel of button/button grouping.
- Use of color, materials, textures, and lights can improve information hierarchy.

What is NOT working?
- Appropriate position for frequently used buttons is important.
- Too many buttons are intimidating.
- Buttons are scattered and not intuitive position.
- Touchscreen requires too much attention.
- Buttons rely on small icons/text which is hard to read.

http://www.jeongyounchoi.com/27891/391635/home/ux-ui-design-clover-car-interface-design
References:

Competitive Analysis / Current Interface

Four different adjustments
just to make AC right the way you like it.

Too many buttons
Buttons could be simplified and grouped further.

AC adjustments
do not show up on navigation screen.

Turning Knob
for the screen on top is far back; Poor ergonomic.

Buttons
with simple icons are centralized at a convenient location.

What is working?
- Screen does not need to be at the same place as control.
- Tactile feel of button/Button grouping.
- Buttons on steering wheels.
- Use of color, materials, textures, and lights can improve information hierarchy.

What is NOT working?
- Appropriate position for frequently used buttons is important.
- Too many buttons are intimidating.
- Buttons are scattered and not intuitive position.
- Touchscreen requires too much attention.
- Buttons rely on small icons/text which is hard to read.
Competitive Analysis / Car Trends

Trends Insight
- More wireless connectivity to information and to others.
- More seamless integration between digital and physical world.
- Devices are more content driven and user centric.
- Better customization capabilities and mobile computing is more prevalent.

Interior Comforts
Communication between Driver and Passengers
Taking the comfort to the next higher planes, models like the 2017 Ford Expedition have ensured better communication between passengers from seat to throttle by using improved materials in the carpet and other features.

Sound insulation from Exterior
The SUV provides more insulation behind the dashboard and door panels, thick glass and a study roof panel, thus preventing itself from blocking the sounds.
Literaturrecherche

Google / Google Scholar
http://scholar.google.de

ACM Digital Library
http://portal.acm.org/dl.cfm --> BibTex, Referenzen, Verweise

Citeseer
http://citeseer.ist.psu.edu/cs

IEEE Xplore
http://ieeexplore.ieee.org/Xplore/guesthome.jsp
Literaturrecherche

Zugriff auf diverse Literaturdatenbanken (ACM, IEEE) über LRZ-VPN und –Proxy:
http://www.lrz-muenchen.de/services/netzdienste/proxy/browser-config/
Zugriff auf das ACM Portal und IEEE über LRZ-Proxy:
https://docweb.lrz-muenchen.de/cgi-bin/doc/nph-webdoc.cgi/000110A/http/portal.acm.org/portal.cfm
Zugriff auf Zeitschriften:
http://docweb.lrz-muenchen.de/
Weitere recherchen

Techblogs:
- engadget.com
- ted.com

Zugriff auf Zeitschriften:
- http://docweb.lrz-muenchen.de/