DesignWorkshop 2
Physical Interfaces for AI Assistants
Marin Zec - Johanna Schlechter - Beat Rossmy - Alexander Wiethoff

Welcome! - 15.04.2024
Welcome! Course Organisation and Teaching Modules:

Marin Zec  
Johanna Schlechter  
Alexander Wiethoff  
Beat Rossmy
Process

UNDERSTAND

EXPLORER

MATERIALIZE

LIVE

Briefing
Research
Use Case Definition
Design Concepts
Experience Prototype A
User Testing

IFD Realisation
Software Development
MVP
Styleguide
Serial Transfer
Product Launch
Product Care / Life Cycle Impulse

ID Engineering
Mech. Detail Engineering
Prototype B
Drawings / DFM

USER CENTERED DESIGN PROCESS
Topic:
- Physical AI Assistants
- Identification of new input/output metaphors for AI Assistants
- Brainstorming through prototyping

Learning Objectives:
- Interdisciplinary collaboration
- Prototyping experiences (Design Process)
- Critical thinking
What's here?
User-Interface Paradigms of Computing

Paradigm 1: Batch Processing

Paradigm 2: Command-Based Interaction

Paradigm 3: Intent-Based Outcome Specification
How can I help you today?

- Create a workout plan for resistance training
- Write a course overview on the psychology behind decision-making
- Explain options trading if I'm familiar with buying and selling stocks
- Brainstorm content ideas for my new podcast on urban design
- Message ChatGPT...
product photography for a modern PCR testing device, large display, sample cartridge hatch, pharmacy, professional, UX, UI, UX/UI, usability, industrial design, apple style, white background, hyper realistic, professional lighting, e-commerce -- v.6.0 - @ImagoDesign (fast, stealth)
Draft Timeline

15th of April - Kick-Off
Draft Timeline

April 22nd - AI Ideation Tools
Draft Timeline

- 29th of April - Portfolio Wall
Draft Timeline

06th of May - Prototyping Tools
Draft Timeline

13th of May - Storyboards
Portfolio Wall
Competitive Analysis....

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.
Where to start?

Scientific Community Portals:

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

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

IEEE Xplore
http://ieeexplore.ieee.org/Xplore/guesthome.jsp
Where to start?

Scientific Community Portals:

Zugriff auf diverse Literaturdatenbanken (ACM, IEEE) über LRZ-VPN und –Proxy:
https://www.lrz.de/services/netzdienste/proxy/zeitschriftenzugang/

Zugriff auf Zeitschriften:
https://www.lrz.de/services/netzdienste/proxy/documentweb/
Introduction
Design Workshop 2 – Physical Prototyping

Prof. Dr. Alexander Wiethoff, Prof. Dr. Marin Zec, Dr. Beat Rossmy
Johanna Schlechter
Austausch und Kommunikationsplattformen

- Vorlesungswebsite
  - Präsentationen & Literatur
    - [https://www.medien.ifi.lmu.de/lehre/ss24/dw2/](https://www.medien.ifi.lmu.de/lehre/ss24/dw2/)
- LRZ Sync + Share
  - Abgaben
  - Korrekturen
- Mailing Liste
  - Ankündigungen
  - Anmeldung: [https://lists.lrz.de/mailman/listinfo/dw2-ss24](https://lists.lrz.de/mailman/listinfo/dw2-ss24)
    - Unter “Abonnieren von dw2-ss24” E-Mail Adresse, Name und Passwort setzen
    - Anmeldung durch Link in Bestätigungsmail verifizieren
Leistungen

- Low-fidelity Prototyp
- Physischer Prototyp
- Video Prototyp (.mp4, etwa 5 Minuten)
- Gruppen-Bericht (.pdf)
- Finale Präsentation (.pdf)
Teams
Kennenlernen

- Wie heißt ihr?
- Studiengang?
- Was erwartet ihr von dem Kurs?
- Stellt eure Superkraft vor
Teambuilding

Bildet Gruppen, die jeweils aus HCI, KuMM sowie Studierenden der HM bestehen. Der Kurs lebt von der interdisziplinären Zusammenarbeit.