MMI 1
Different User Needs
INTERACTION DESIGN

KNOW?

FEEL?

...DO?
Purpose of this lecture: A basic understanding of the user centered design process plus how different contexts and user needs have a massive impact on the solution.
What are the different types of users and usage context?

Some of the most relevant:
External context:
Surroundings

Personal context:
Novice or expert
Frequent or infrequent usage
Physical or psychological limitations

Modal context:
Lean forward or lean backward
Search or browse
Front of attention or minimal attention
Most of these might be obvious, but it's always important to keep them in mind when designing your solution...
The external context
the surroundings
unease between them, Riker was no longer so sure that they had set aside their old differences. Maybe being married to a veteran counselor is just making me hypersensitive to body language, he thought. But I think I could cut the tension between those two with a bat’leth.

“So Titan really has been tossed clear out of the galaxy,” said Commander Christine Vale, Titan’s ever-efficient executive officer.

“The stellar-cartographic records don’t lie,” Pazlar said, spreading her delicate hands in a helpless gesture. She had come to a full stop along the same plane the platform occupied, though she remained a
The external context will effect not only the physical device, but also the mindset of the user...
The personal context
novice user

vs.

expert user
novice user, limited eyesight...
expert user, high stress...
frequent usage
vs.
ininfrequent usage
infrequent user, tired...
frequent user, in a hurry...
Different user types and usage frequency will require dedicated solutions.
User modes
lean forward

vs.

lean backward
TV - Lean backward
Typically a TV viewer is "leaning back" in their sofa, using only a Remote Control or a game controller as a means of interaction.
While a PC user is 2ft or 3ft from his high resolution screen using a mouse and keyboard.
The demands of distance, user input devices, and user mode - requires the application's UI to be designed accordingly.
search vs. browsing
Monday, June 8, 2009

http://www.google.com/search?hl=en&q=medieninformatik+imu&aq=f&oq=&aqi=g1

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Personen
Stellenangebote

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Medieninformatik LMU Muenchen.
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This is especially interesting for retailers. The internet lent itself so far quite well for comparative purchases - I know what I want, where can I get it cheap?

But what about impulse shopping behaviors?
Different modes can require radically different solutions...
80/20 rule
80/20 rule

A principle for setting priorities: users will use 20% of the features of your product 80% of the time. Focus the majority of your design and development effort (80%) on the most important 20% of the product.
How to Perform a Requirements Analysis?

- General methods, before knowing user community in detail:
  - Surveys, opinion polls
  - E.g. Internet polls

- Methods applicable when user groups are roughly known:
  - Focus groups
  - Interviews
  - Diary studies

- Methods targeting very specific user groups:
  - Ethnographic observation
  - Task analysis
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Focus Group Basics
informal group gathering 6-8 people
focus on a specific topic
get indication how people think and feel
Collecting opinions, attitudes, feelings, perceptions, and ideas
Understand why people act or react in a certain way
Advantages

– Wide range of information
– In-depth information (Why user ...)
– Possibility to explore related topics or go into more detail
– Cheap and easy to do

Disadvantages

– The moderator plays a significant role and can influence the results
– No quantitative information can be gathered
– Findings can not be easily generalized

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User Research with Interviews and Questionnaires
User questionnaires

User Research Questionnaire

1. User Research Questionnaire

2. User Research Questionnaire

3. User Research Questionnaire

4. User Research Questionnaire

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47. User Research Questionnaire

48. User Research Questionnaire

49. User Research Questionnaire

50. User Research Questionnaire
Informal gathering of qualitative user data
Cheap and easy
Creates a lot of data, potentially expensive to analyze
Good for review / discussion with the user
Example: User Research in an elderly home
daily routines
caretakers tasks
caretakers tasks
vs. elderly tasks
daily routines
elderly’s devices
caretaker’s device
elderly’s device
elderly tasks
elderly tasks
caretaker´s screens
elderly’s devices
hierarchies of main findings
Brainstorming and Concept Generation
"Post-IT" Version
Clustering or creative writing
small teams are often more efficient
many ideas within a short time-range (25–35–minutes)
No early judgement
(there are no “bad” ideas at this point)
Also bringing in “crazy ideas”  
(sometimes crazy ideas can make a breakthrough)
Constantly focused on the theme
Silent voting of best Ideas
Scenarios and personas
First details and interface sketches

On the right side of the screen is something that looks like a big wheel. Helga puts her hand on the screen, where the wheel is, and moves it up. The wheel starts rolling and numbers representing years start moving. When the year 1964 is centered, she removes her hand.
„Low Fidelity“ paper prototypes
History of Paper Prototyping

Paper prototyping started in the mid 1980s and then became popular in the mid 1990s when companies such as IBM, Honeywell, Microsoft, and others started using the technique in developing their products.
Paper prototype of a typical form-filling screen

Paper prototype of a tabs-based design

User test of a low-fidelity paper prototype of a website

Typical set-up of the usability laboratory for a test session with a paper prototype

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User test of a paper prototype of a device-based interaction

User test of a high-fidelity paper prototype of a homepage.

Testing hardware user interfaces: mockup of a kiosk.
Example:
Video Prototype (Low Fidelity)
It’s really hard to design products by focus groups. A lot of times, people don’t know what they want until you show it to them.

Steve Jobs
„High Fidelity“ Prototype Usability Test Sessions
Like all forms of design, visual design is about problem solving, not about personal preference or unsupported opinion.

Bob Baxley
Viseaften
Journalistforeningen
1968, Music
References (books)

-bill moggridge: designing interactions
  Publisher: The MIT Press; 1 edition (October 1, 2007)
  Language: English
  ISBN-10: 0262134748

-bill buxton: sketching the user experience
  Publisher: Morgan Kaufmann (March 30, 2007)
  Language: English
  ISBN-10: 0123740371

-don norman: the design of everyday things
  Publisher: Basic Books (September 17, 2002)
  Language: English
  ISBN-10: 0465067107

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  Publisher: Prentice Hall PTR (December 15, 1994)
  Language: English
  ISBN-10: 0133033899

links: www.dkds.ciid.dk
  www.arduino.cc
  http://www.useit.com/papers/guerrilla_hci.html

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