

User-Centered Design

# Design methods

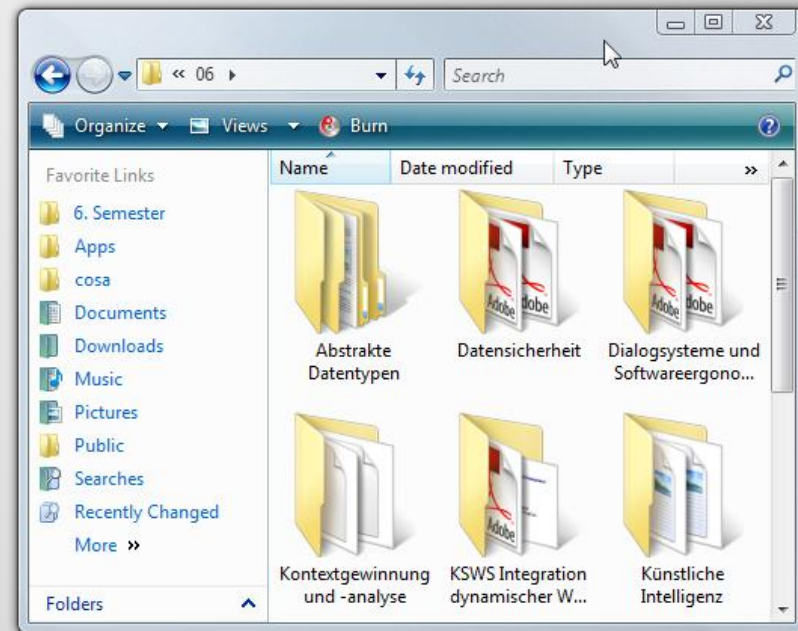
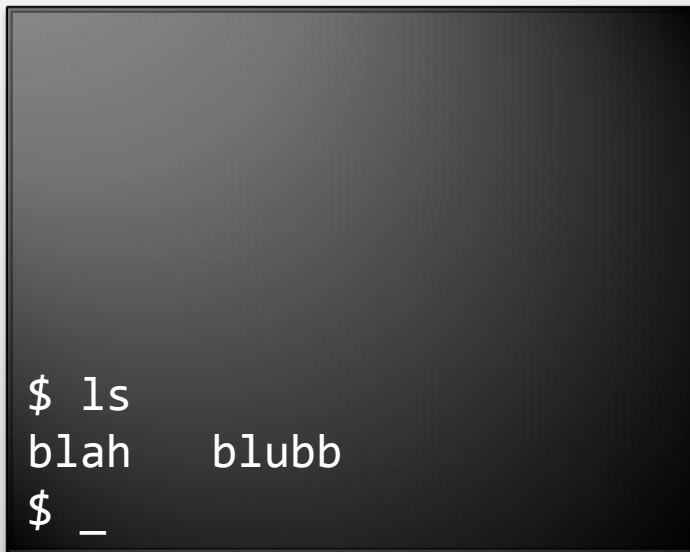
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# Introduction

Boring stuff that wouldn't fit anywhere else.

# UI – User Interface

- What the user sees and interacts with



# UX – User Experience

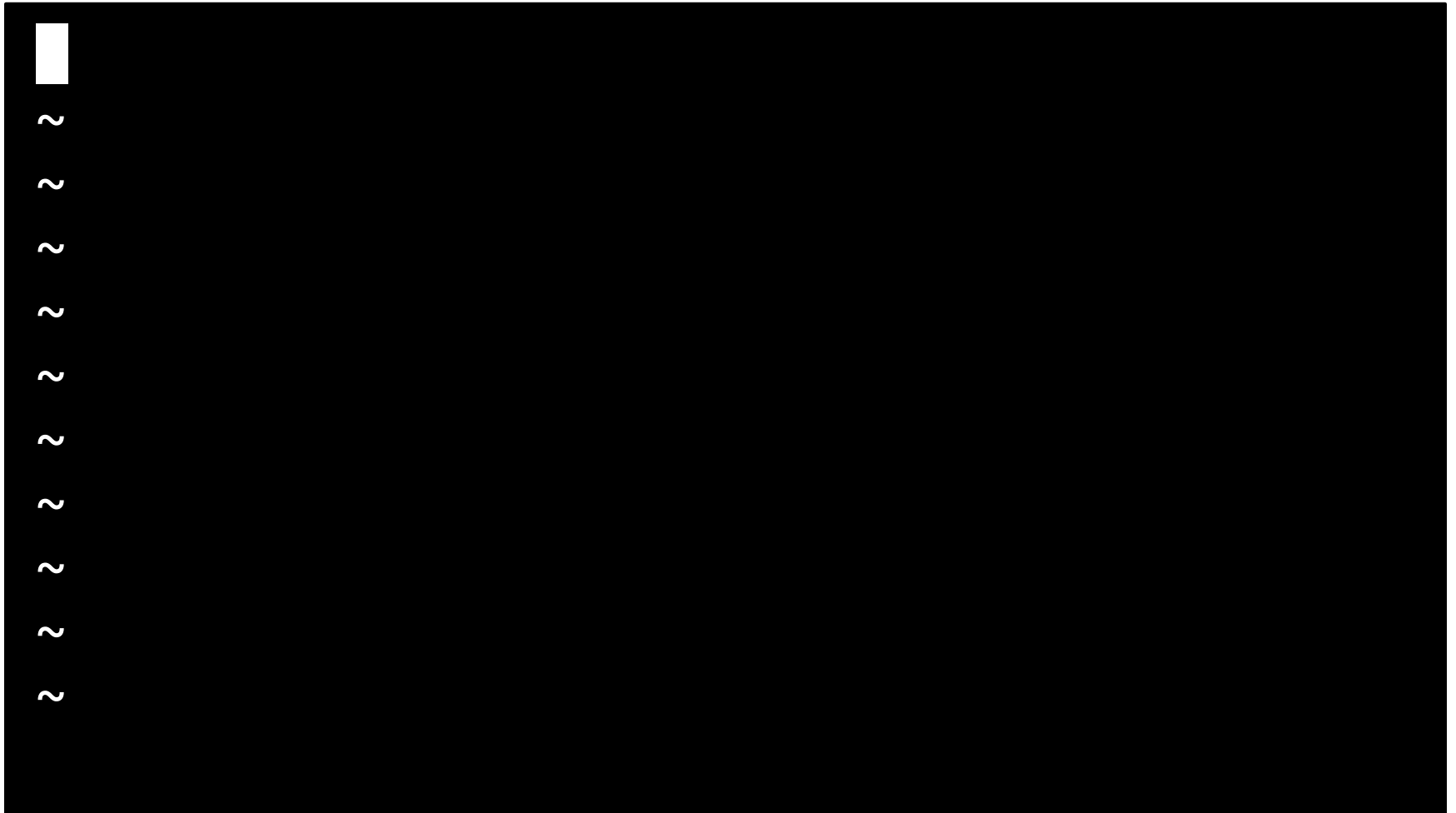
- “All aspects of the user’s interaction with the product: how it is perceived, learned, and used.” —Don Norman
- This includes UI, but has a wider scope



# UCD – User Centered Design

- The needs of the user are primary concern and not possibilities or limitations of technology
- User's mental model
- Goals and objectives
  - "The user wants" vs. "The software should include"

# Why do we need this?



# Why do we need this?

- Here should be a video of a Word 2003 eyetracking study. I can't publish this here but it is included in Jensen Harris's talk at Mix 08:
  - <http://sessions.visitmix.com/?selectedSearch=UX09>

# What I won't talk about.

- Usability Testing
  - Is usually part of every method I present here
  - “Low-level”
  - Hallway Testing as variation
- GUI design and layout
  - Undoubtedly essential
  - But low-level again

# Contextual Design

# Contextual Design

- Developed by Holtzblatt und Beyer
- Very expensive, but complete workflow, also for redesign of activities
- Incorporate the work context into the design
- Goal is a product that matches the needs of the users as good as possible

# Process

1. Collect data
2. Work modeling
  1. Flow model
  2. Sequence model
  3. Artifact model
  4. Cultural model
  5. Physical model

# Process

3. Consolidation
  - Affinity diagram
4. Work redesign
5. User Environment Design
6. Prototyping and Testing

# Iterative Development in the Field

# Core principles

- *"In the field"* – develop where the system will be used
- Incorporate the users of the system into the development process
- Users do what they will do with the finished system
  - Contrary to Usability Testing where usually only a small part is tested
- Constant and rapid iteration
- *Proto-application* – a kind of prototype, but will be refined to a final system

# Core principles

- Direct work with users and other stakeholders
- Some similarities to Contextual Design
  - lightweight
  - Centered around the implementation
- Rapid Turnaround

# Phases

## Discovery

- Gain understanding of customer environment, problems and opportunities
- Initial set of system requirements

## Proof of concept

- First proto-application, based on initial requirements
- Small, strategically selected subset of functionality
- Early version of the UI

# Phases

## Pilot

- Functionality is added, modified and prioritized
- Changes based on continuous field-based stakeholder inquiry and evaluation
- Increases in scope, depth, robustness of the system and field sites where it is installed

## Deployment

- Completing and deploying the system

# Goal-directed Design

# Goal-directed Design

- Developed by Alan Cooper
- Goal is to find out what exactly the users are and what they want
- Sometimes users cannot or should not be asked
  - Nearly no one knows what he wants
  - Problems in daily routine are usually mitigated by workarounds and are seldom conscious

# Personas

- Imaginary users for which the software is designed
- “Personas are not real people, but they represent them throughout the design process. They are hypothetical archetypes of actual users. Although they are imaginary, they are defined with significant rigor and precision.” —Alan Cooper

# Personas

- Don't talk about "the user" but rather about a specific persona
- Personas should become inevitable in the design and development process
- More detailed personas are more effective as a design tool
- Je genauer die Personas ausgearbeitet sind, um so effektiver sind sie als Werkzeug.

# Personas

- Users have goals and needs, but also habits and quirks
- Personas are abstract representations of users
- They are fictive, stereotypical, concrete and “not elastic”

# Tasks ≠ Goals

- Goals are always final
- Goals are usually stable
- Tasks are steps to achieve a goal
- Tasks may change over time
- Users must be observed to determine their goals
  - Usually they can't tell their goals

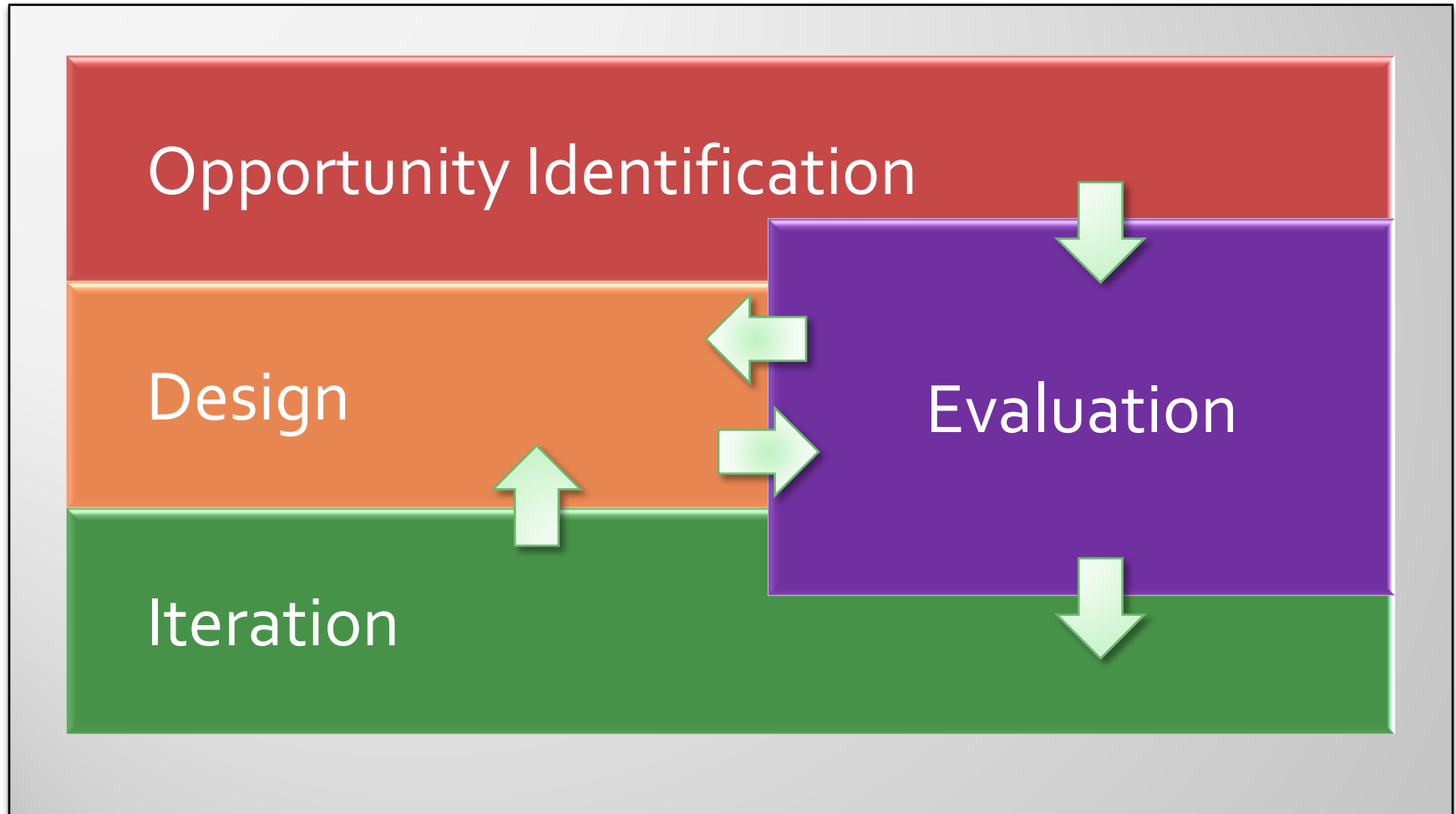
# Value-centered Design

# Value-centered Design

- Value as fourth “leg” for design, besides system, user and context
- Design is the intentional creation of value
- Iterative process to maximize value
- Evaluation should only take effects on value into account



# Process



# Process

- Opportunity Identification
  - Description and specification of intended value
  - Usage context
  - Personas (GDD) or Cultural models (CD)
- Evaluation
  - Planning should begin before design
  - Find evaluation criteria and an evaluation strategy
  - Better do evaluation in the real world, instead of the lab
  - Collect difficulties encountered by users and do evaluation whether they impact value

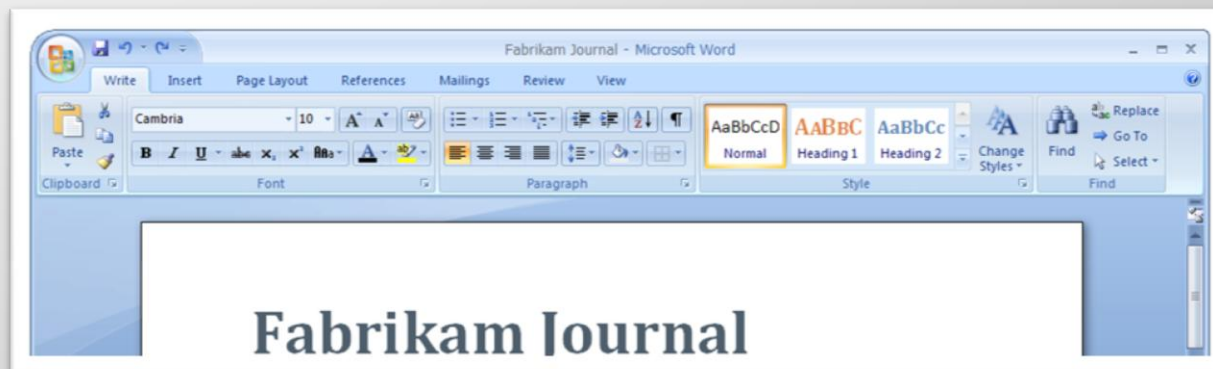
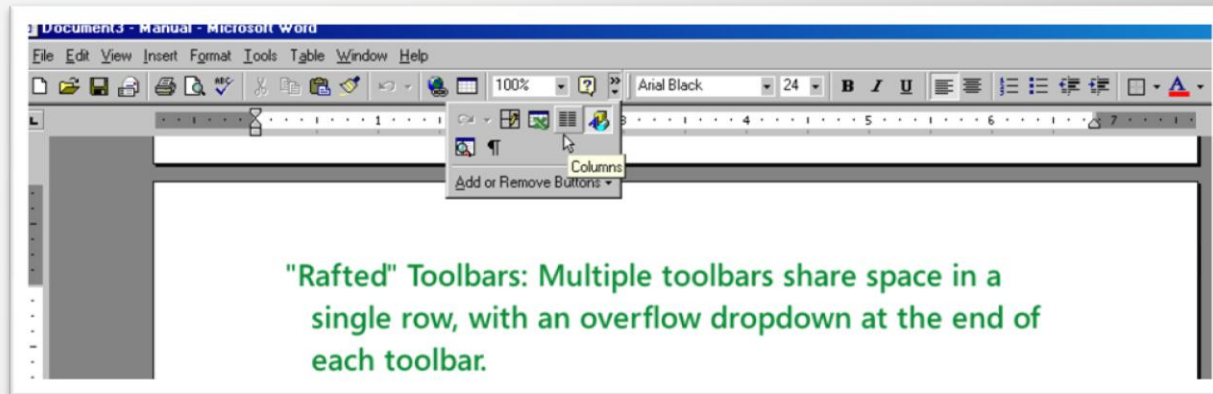
# Process

- Design
  - Value delivery scenarios: Ideas how to achieve intended value
  - Interaction Design: Concept of interaction
  - Design Implementation: Usable product
- Iteration
  - Causal analysis
  - Design change recommendation

# Examples

There are actually people using this stuff.

# Office 2007



# Office 2007

- Design Tenets
  - “A person’s focus should be on the content, not on the UI. Help people work without interference.”
  - “Reduce the number of choices presented at any given time.”
  - “Increase efficiency.”
  - “Embrace consistency, but not homogeneity.”
  - “Give features a permanent home. Prefer consistent-location UI over ‘smart’ UI.”
  - “Straightforward is better than clever.”

# Logitech "Peacock"

- Low-cost scanner
- Software was much too powerful for the intended market segment



# Logitech "Peacock"

- 3 Personas
  - Malcolm
    - Self-employed web developer, not very technical
  - Chad
    - 10 year old pupil, enhances his homework with scanned pictures
  - Magnum, DPI
    - Professional graphics designer, but low on money
    - Will edit images mainly with Photoshop

# Logitech "Peacock"

- Crop
- Resize
- Reorient

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