Design, what is it about?
This lecture discusses basic concepts concerning design and how to work with design: what is it about?, design skills, the design process, etc.

Design...
- Artificial world
  - world consisting of engineered "objects" / artifacts
- Design = conscious act that results in a product
  (concrete, abstract)
- To work with design is complex
- Completely rational approach is not possible
  - All properties and consequences are not the result of conscious design decision
  - Faulty products
- Requires a reflective approach
  - Awareness

Reflective Design...
- The product or the design is part of a larger context
- Design is about knowledge creation
- Must have ability to critically reflect and articulate over
  - Design in large
  - Design skills
  - The product, ideas, etc.

A Material without Characteristic...
- What is it possible to create / shape with the digital material?
  - Are there any limits?
  - How plastic is the material?
- At least as plastic as the alphabet and written language
- Open and unrestricted
- What is good and bad design?

Good Design...
- Is design measurable?
- Context dependent
  - Fast and/or hard to use
  - Easy to use without the correct functionality
  - Intensions and expectations
  - Many interacting factors
    - Ethics, esthetics, cultural, functional, ...
- The designer's opinions and judgments are essential
  - = Reflection

Basic Concepts
Interaction design – “a process organized within limited resource and frames to create, shape and define the user-oriented properties (structural, functional, ethical, esthetic) of a digital artifact for one or more clients”
Basic Concepts

The Design process – a process from the first ideas of a possible future takes shape. It continues all the way to a specification that can be the basis for the implementation or production.

The Design situation – situation that is both the reason for a particular design process is carried out and the context in which the design process is carried out.

Introduction to Design

The Designer – someone who takes an active part in the shaping of the artifact.

Client – a person or organization that has given the designer the task.

User – user of the artifact.

Basic Concepts

Digital artifacts – artifacts whose basic structure and functionality enabled by information technique.

The Design Process

ü Design is about responsibility
ü Design is:
  • To create something new
  • An ethical activity
  • An esthetic activity
  • A political and ideological activity
ü Each design process is unique
  • The designer, resources, and the situation
ü The design process
  • there is a large element of uncertainty in it

The Fantastic Design...

ü Filled with situations that require
  § Creativity, thinking in new ways, to see people and situations in new ways
ü Filled with situations that require the ability to handle
  § paradoxes, dilemmas and conflicts
ü Design is practical and concrete
ü Design is about wanting something
ü Design is awesome and exciting but also hard and difficult

The Nature of the Process...

ü The design process is difficult to describe comprehensively
  § The complexity and variability
ü There is a need for models, descriptions, and theories
ü Requires a critical stance towards descriptions and application of models based on deep understanding
  § Experience

The Process

ü The process starts in the first meeting with the task, such as
  § Background material presented
  § Problem description is reviewed
  § The list of requirements is read
  § The mission statement is presented
ü That much earlier than one traditionally mean
ü The design process involves a lot of walking between
  § Level of details
  § The abstract and the concrete
ü Problems and the dilemma is not the same ... and must be attacked in different ways
  § Design is not about solving a problem
  § Non-linear, non-iterative but a dynamic process ...
From Vision to Specification…

- Vision - a first organizing principle
  - Diffuse
  - Incomplete
  - Idea of a possible world
  - Abstract
- Operative View - concretization of a vision
  - In concrete terms,
  - Simple sketches, metaphors, etc.
  - From vague to concrete over time
- Specification - a sufficiently elaborate operational picture, a synthesis

Design as Mental Process…

- Donald Schön, working with problems without a correct answer:
  - Using familiar methods/tools
  - Surprised for the result
  - Reflection of what happened
  - Reflections on new strategies and methods/tools
  - New ideas and methods are used to generate new “surprises”

Design as Mental Process…

- A scary walking between levels of abstraction

Design as Mental Process…

- Degrees of freedom
  - Limitations engine for creativity
  - Too many degrees of freedom hard handle
- External representations
  - Sketches for:
    - shaping ideas
    - dialogue with yourself
    - communicate the design with others
- Exploring the design room
  - Widen / diverge and focus / converge
Design as Mental Process...

- Capture and understand the situation
  - Forming such a good view as it goes in the context of the situation, not to seek the truth
- Composition - final step
  - Put together a whole
  - Balance, reflection, critical thinking

Design as Social Process...

- Kernel– design team
  - Roles
  - Establish the vision
  - Forming the process
- Periphery - directly concerned
  - Customer
  - Users
- Context - affected
  - Society
  - Surroundings

Design Skills......

- The quality of the design and how the process looks like depends on who performing it
  - Looks different for different designers
  - What does it mean to be a good designer?
  - Knowledge of the design field
  - Skilled in the craftsmanship
  - Is it possible to develop the ability to design
  - Design skills
  - Everyday Design
  - Everyone do design and develop their design skills in everyday situations
  - Design skills
    - prepared
    - Unique for the situation

Design Skills......

- Interaction design = "a process organized within limited resource and frames to create, shape and define the user-oriented properties (structural, functional, ethical, esthetic) of a digital artifact for one or more clients"
- Create and shape = creativity and analytical skills
- Identify = critical judgment
- Clients/Customer = rationality and communication
- Designing the structural = technical knowledge
  - Data / System Science
- Designing the functions = the use
  - HCI, psychology...
- Designing ethical = values and ideals
- Design esthetic = visualize and compose

Design Skills......

- Rationality
  - Rational process
  - Quality of the process
- Communication
  - Central to all phases of design
- Creativity and analytical ability (not or)
  - both are needed
    - Distinguishing good from bad
    - Creativity for managing complexity

Design Skills......

- IQ
  - Logical thinking and analytical skills
- Design Intelligence
  - Create wholes
  - Synthesis (put things together)
    - Fantasy
    - Large repertoire of examples (experience)
    - Feeling for quality
    - Context/Domain dependent
Design Skills…

✓ Value & ideals
  • What's the responsibility you have as a designer
  • Esthetic sensitivity
  • Visualize and compose

✓ Evaluate or judge
  • Not optimal solution, we need an for the situation adequate solution
  • Frames must be created

✓ Important part in all phases

To Develop the Design Skills

✓ Readiness to act
✓ Intuition
✓ Feeling
✓ Feeling for quality
  • Product
  • Process
✓ Develop the language of design
✓ Reflective thinking
  • retrospective reflection