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...

- Artistic world
  - world as consisting of engineered "objects" / artifacts
- Design = conscious act that results in a product (concrete, abstract)
  - To work with design is a 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"
### The Design Process

- **Design is about responsibility**
- **Design is:**
  - To create something new
  - An ethical activity
  - An aesthetic activity
  - A political and ideological activity
- **Each design process is unique**
  - The designer, resources, and the situation
  - The design process
  - There is a large element of uncertainty in it
The Fantastic Design...

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

The Nature of the Process ...

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

The Nature of the Process ...

- 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
- That is much earlier than one traditionally mean
- The design process involves a lot of walking between
  - Level of details
  - The abstract and the concrete
- 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…

or... "in the head of a designer"

- It’s important to understand the nature of design work
  - Working with “problems” without an unique solution
  - The understanding for the task and solution emerges concurrently in a dialogue with the situation where solutions and ideas are tested

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

Vision
Operative view
Detail
Specification

The Process

— Design of Emergent Interaction Systems —

Design as Mental Process…

Problematic and questioning
- Ask as a child!
- Provoking!

Why?

— Design of Emergent Interaction Systems —

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 of Emergent Interaction Systems —
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

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Design as Social Process...

- Kernel - design team
  - Roles
  - Establish the vision
  - Forming the process

- Periphery - directly concerned
  - Customer
  - Users

- Context - affected
  - Society
  - Surroundings

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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
The Designer

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
- Designing the functions -> the use
  - HCI, psychology, ...
- Designing ethical -> values and ideals
- Design esthetic -> visualize and compose

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

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...**

- 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