Design for Usability

» Design examples and discussion on interaction design.

Bengt Göransson | Usability Designer | Bengt.Goransson@Guide.se
Department for Human-Computer Interaction, Uppsala University

Guide Redina AB | Smedsgränd 9, SE-753 20 Uppsala, 018-66 08 00

Why?
Delmoment i användarcentrerad systemdesign

Designexempel

$160 Millions
Views on design

- **Craft approach**
  - It focuses on the designer’s need for talent, not for methodology.

- **Enhanced software engineering approach**
  - Attempts to introduce HCI techniques into the repertoire of traditional systems engineering.

- **Cognitive engineering approach**
  - Aims at applying theories from cognitive psychology to the problems facing the designer.

- **Technologist approach**
  - Tries to solve the problems of interface design by providing appropriate tools.


For every design rule one can find at least one situation, where following the rule would be sheer madness.
What’s in Design?

1. Design is a **process**, it is not a state and cannot be adequately represented statically.
2. The design process is **non-hierarchical**, neither strictly bottom-up nor top-down.
3. The process is radically **transformational**, involving the development of partial and interim solutions which may ultimately play no role in the final design.
4. Design intrinsically involves the discovery of **new goals**.

*Carroll, Rosson, 1985*

Five activities in interaction design

- **Understanding**
  What’s going on here? What is the underlying problem to be solved? Photographs, videos, sketches, and notes can be used to aid designers in observing and analyzing the information or the problem. Designers talk with people, especially clients and users, and look at information to be communicated.

*Crampton Smith och Tabor, 1996*
Five activities in interaction design

- **Abstracting**
  What are the main elements? What kind of information is being conveyed? What do people want to do with it? What is important? What is irrelevant? Lists, sketches, and diagrams are the usual tools here.

- **Structuring**
  What are the relationships among the elements? What different ways can the elements be ordered to be useful for users? What are the users interested in? How much can they take in? The designers’ assumptions will be checked with the users and the clients.
Five activities in interaction design

- Representing
  How can this structure be represented in visual and auditory form? What representations does the material suggest? What representations might the designer glean from thinking about the users' world? Should the representation be concrete or abstract? Is metaphor appropriate? Here, the designer typically uses sketches on paper and interactive sketches in computer based tools, which may be evaluated with colleagues or users.

- Detailing
  Exactly what color should this element be? What style of depiction should be used? How is the picture plane handled? How do elements move? Should an illustrator be hired? Some designers work directly in paint programs e.g. Photoshop. Others start on paper, and move to the computer later.
Fast tap

Demo
"However, adhering to these design guidelines does not guarantee usability. The guidelines are valuable tools, but to be part of an effective software design process, they must be combined with other factors such as design principles, task analysis, prototyping, and usability evaluation."

www.microsoft.com/usability