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INTERACTION DESIGN

PREECE · ROGERS · SHARP

beyond human-computer interaction
4th Edition

Chapter 9

THE PROCESS OF INTERACTION DESIGN

THE PROCESS OF INTERACTION DESIGN

👁 597

Published by Crystal Ellis

Modified over 8 years ago

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Presentation on theme: "THE PROCESS OF INTERACTION DESIGN"— Presentation transcript:

1 **THE PROCESS OF INTERACTION DESIGN**
Chapter 9
THE PROCESS OF INTERACTION DESIGN

2 **Overview What is involved in Interaction Design? Some practical issues**
Importance of involving users
Degrees of user involvement
What is a user-centered approach?
Four basic activities
Some practical issues
Who are the users?
What are 'needs'?
Where do alternatives come from?
How to choose among alternatives?
How to integrate interaction design activities in other lifecycle models?

3 **What is involved in Interaction Design?**
It is a process:
a goal-directed problem solving activity informed by intended use, target domain, materials, cost, and feasibility
a creative activity
a decision-making activity to balance trade-offs
Generating alternatives and choosing between them is key
Four approaches: user-centered design, activity-centered design, systems design, and genius design

4 **Importance of involving users**
Expectation management
Realistic expectations
No surprises, no disappointments
Timely training
Communication, but no hype
Ownership

Full time: constant input, but lose touch with users
Part time: patchy input, and very stressful
Short term: inconsistent across project life
Long term: consistent, but lose touch with users
Newsletters and other dissemination devices
Reach wider selection of users
Need communication both ways
User involvement after product is released
Combination of these approaches

6   What is a user-centered approach?
User-centered approach is based on:
Early focus on users and tasks: directly studying cognitive, behavioral, anthropomorphic & attitudinal characteristics
Empirical measurement: users' reactions and performance to scenarios, manuals, simulations & prototypes are observed, recorded and analysed
Iterative design: when problems are found in user testing, fix them and carry out more tests

7   Four basic activities in Interaction Design
Establishing requirements
Designing alternatives
Prototyping
Evaluating

8   A simple interaction design lifecycle model
Exemplifies a user-centered design approach

9   Some practical issues Who are the users? What do we mean by 'needs'?
How to generate alternatives
How to choose among alternatives
How to integrate interaction design activities with other lifecycle models?

10   Who are the users/stakeholders?
Not as obvious as you think:
those who interact directly with the product
those who manage direct users
those who receive output from the product
those who make the purchasing decision
those who use competitor's products
Three categories of user (Eason, 1987):
primary: frequent hands-on
secondary: occasional or via someone else
tertiary: affected by its introduction, or will influence its purchase

11   Who are the stakeholders?
Check-out operators
• Suppliers
• Local shop owners
Customers
Managers and owners

12   What do we mean by 'needs'?
Users rarely know what is possible
Users can't tell you what they 'need' to help them achieve their goals
Instead, look at existing tasks:
their context
what information do they require?
who collaborates to achieve the task?
why is the task achieved the way it is?
Envisioned tasks:
can be rooted in existing behaviour
can be described as future scenarios

13   How to generate alternatives
Humans stick to what they know works
But considering alternatives is important to 'break out of the box'
Designers are trained to consider alternatives, software people generally are not
How do you generate alternatives?
'Flair and creativity': research and synthesis
Seek inspiration: look at similar products or look at very different products

14   IDEO TechBox Library, database and website all-in-one
Contains physical gizmos for inspiration

15   The TechBox
16   How to choose among alternatives
Evaluation with users or with peers, e.g. prototypes
Technical feasibility: some not possible
Quality thresholds: Usability goals lead to usability criteria set early on and check regularly
safety: how safe?
utility: which functions are superfluous?
effectiveness: appropriate support? task coverage, information available
efficiency: performance measurements
learnability: is the time taken to learn a function acceptable to the users?
memorability: can infrequent users remember how to achieve their goal?

17   Testing prototypes to choose among alternatives

18   How to integrate interaction design in other models
Integrating interaction design activities in lifecycle models from other disciplines needs careful planning
Several software engineering lifecycle models have been considered
Integrating with agile software development is promising
it stresses the importance of iteration
it champions early and regular feedback
it handles emergent requirements
it aims to strike a balance between flexibility and structure

**19   Summary Four basic activities in the design process**
Establishing requirements
Designing alternatives
Prototyping
Evaluating

SECOND MIDTERM REVIEW
CS 580
Human Computer Interaction

Part 1: Introducing User Interface Design
• Chapter 1: Introduction
– Why the User Interface Matters
– Computers are Ubiquitous
– The Importance of Good User Interface Design
– Designing for Users
– The Two Types of Knowledge Needed for UI Design
– Evaluation
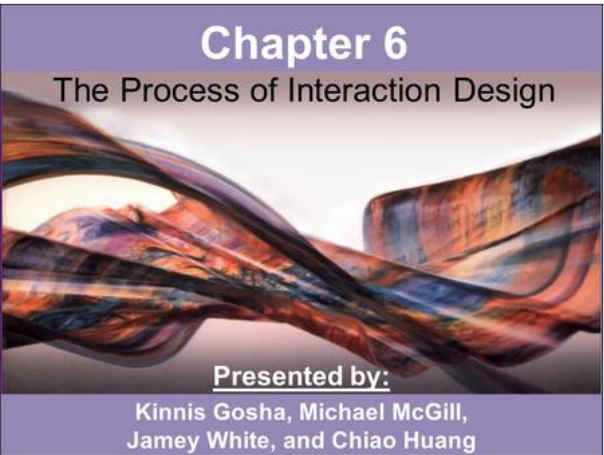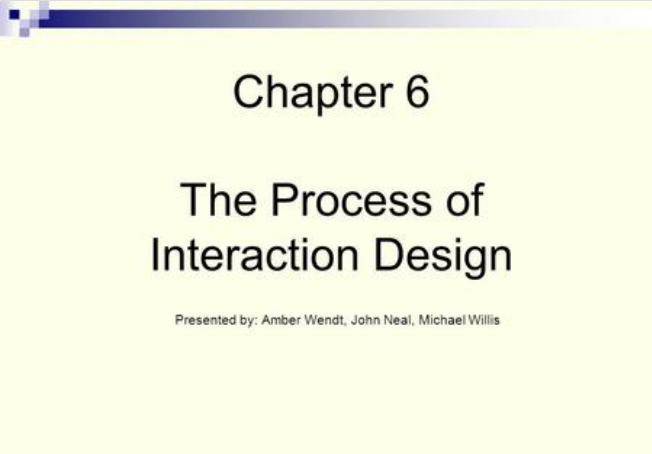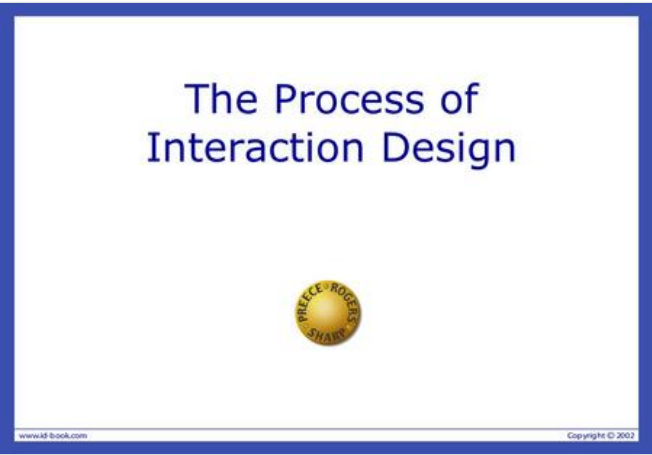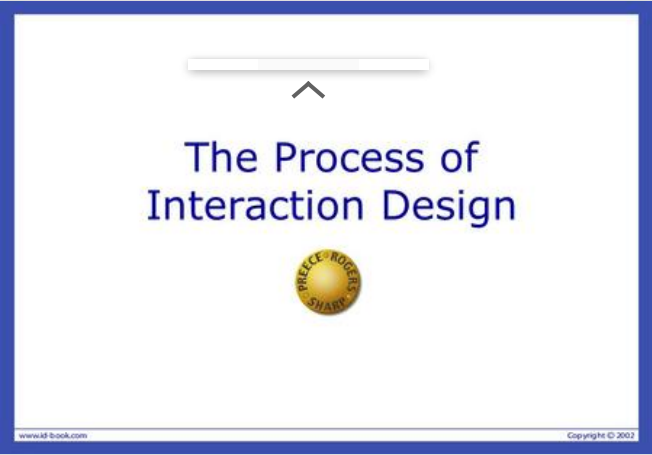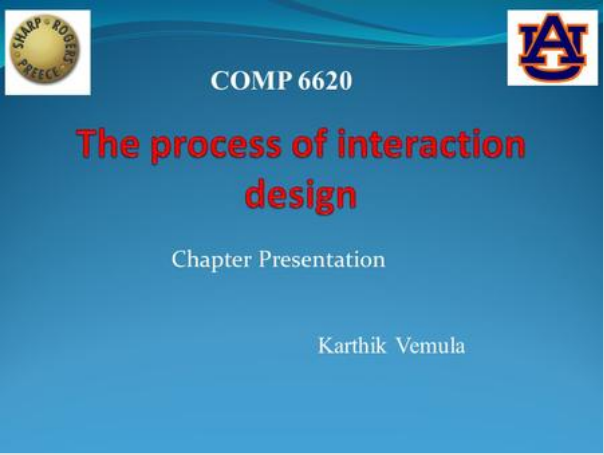
COMP 6620
The process of interaction design
Chapter Presentation
Karthik Vemula

The Process of Interaction Design

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Chapter 6
The Process of Interaction Design
Presented by: Amber Wendt, John Neal, Michael Willis

User-Centered Design and Development
Instructor: Franz J. Kurfess
Computer Science Dept.
Cal Poly San Luis Obispo

Chapter 6
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Presented by:
Kinnis Gosha, Michael McGill, Jamey White, and Chiao Huang

User-centered approaches to interaction design

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User-Centered Design and Development

Instructor: Franz J. Kurfess
Computer Science Dept.
Cal Poly San Luis Obispo

User-Centered Design (UCD)

CS 352 Usability Engineering
Summer 2010

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  - Depends on its use
- How do you design a good length of string?
  - Can be determined by a process
- What is a good user interface?
  - Depends on its use
- How do you design a good user interface?
  - Can be determined by a process

INTRODUCTION

Desired Quality Characteristics in Cloud Application Development

Leah Riungu-Kalliosaari

Chapter 6

Design Thinking

Process of Interaction Design

CSCD 487/587
Human Computer Interface

Winter 2013

Lecture 3
HCI and Interactive Design

Design and Evaluation of Iterative Systems

- For most interactive systems , the 'design it right first' approach is not useful.
- The 3 basic steps in the development of an user-centered, iterative system are -- Design, Evaluation and Implementation.
- A good design takes into account characteristics of the intended users and the work they do.

Usability & Usability Engineering

Usability 2004 J T Burns   1

User Centered Design

Lecture # 5

Gabriel Spitz   1

Chapter 6
The Process of Interaction Design

- By,
  - Matt Bergstein
  - Kevin Clark
  - Carol Lawson
  - Angelo Mitsopoulos
  - Phil Townsend

Human-Computer Interaction - 8

Prototyping

Gary Marsden
(gaz@cs.uct.ac.za)
July 2002

University of Cape Town   Gary Marsden   Slide 1

CS 320 Interaction Design

DISCOVERY

Textbook:
S. Heim, The Resonant Interface;
HCI Foundations for Interaction Design [Chapter 4]
Addison-Wesley, 2007

March 2, 2011

Chapter 9

The process of interaction design

Process of Interaction Design

User-centered approaches to interaction design

What is Interaction Design?

- "…designing interactive products to support people in their everyday and working lives."
  (Preece, Rogers, and Sharp– 2002)
- A multidisciplinary pursuit:
  - Anthropology
  - Computer Science
  - Cognitive Psychology
  - Engineering
  - Ergonomics
  - Graphic arts
  - Sociology
- A Little Bit of History…
  - Cards, flip switches, terminals, tablets/pucks, mice, windows, web …

The process of interaction design

RUP Implementation and Testing

- RUP Artifacts and Deliverables
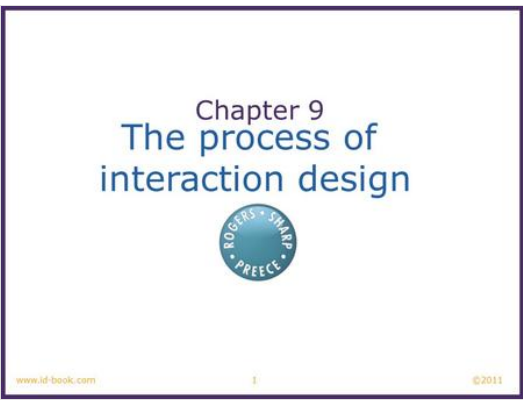- RUP Implementation Workflow
- RUP Test Workflow

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Interaktionsdesign-processen

Sharp Kapitel 9
Anker Helms Jørgensen

27. august 2007   Lektion 1c

design process

Chapter 9
The process of interaction design

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Unit 8a - Approaches to Design

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