Information Design

SIMS 202
Profs. Hearst & Larson
UC Berkeley SIMS
Fall 1999
Last Time

- Psychology of Categorization
  - Properties of Categorization
    » Characteristic Features
    » Centrality
    » Basic Level Categories

- How to combine attributes to categorize information
  - Subject Headings vs. Descriptors
  - Hierarchies vs. Facets
Cognitive Aspects of Categorization

- Processes of categorization underlie many of the issues having to do with information organization.
- Human categories have graded membership, consisting of family resemblances.
- Basic level, subordinate, and superordinate level categories seem to be cognitively real.

Keep these in mind when designing classification systems.
Today

- Information Design
  - How it is done
  - An example: web site design
Web Site Design Tasks

- Three tasks:
  - Information Design
  - Navigation Design
  - Graphic Design

- Together these are sometimes called Information Architecture
Information Design
The First Step

Find out what
- Users
- Customers
- Patients
- Passengers ...

need.
The Second Step

Compile and Organize the Information
Information Organization

Gather a collection of concepts
- Brainstorm
- Decompose existing info organizations
  » Lists of concepts
  » Work flow diagrams
  » Descriptions of best practices
- User Surveys
- Ethnographic studies

An art, a practice, but not a science.
Information Organization

Arrange, Compress, and Organize these Concepts. How? Refer to Step 1.
People sometimes use a design technique called "Participatory Design".

Informally arranging and rearranging information until it is in a useful organization.

Often need to iterate and revise.
Information Organization Step Needed in Many Fields

- Library Classification Systems
  - Soergel article in reader
- Database Design
  - Teorey chapters in reader
- Mechanical Engineering
  - QFD article in reader
- Building an Informative Website
  - Sano article in reader
- Building Expert Systems
The Third Step

This differs depending on what kind design process is under way.
Web Site Design

- Sano chapter describes how to do information and navigation design
- This description is verified by ethnographic studies performed by Mark Newman last year.
An Ethnographic Study of Web Site Design

- By Mark Newman, UCB CS grad student
- Field visits to four companies
  - three design firms
  - one design department of web “portal”
  - in addition: two independent consultants
- *In situ* interviews with designers
  - placed focus on specific projects
- Collection of artifacts
  - used artifacts to frame discussion
Who They Were

- 11 interviews total
- Training & Education
  - 7 graphic design, 2 computer science, 1 cognitive science, 1 other
- Current responsibilities
  - 4 graphic design, 3 UI design, 4 hybrid
- Professional experience
  - 7 had < 5 years experience
  - others 8, 10, 20+
The Design Process

- Several published accounts exist
  - But little agreed upon terminology
- “Official” process structures work and communication
  - Defines a set of deliverables (artifacts)
  - However, “everything is custom”
    » Process is malleable
- The design process is a framework for discussion.
Web Site Development Process

Web Site Design Process
Assess needs
- understand client’s expectations
- determine scope of project
- characteristics of users
Design Process: Discovery

Activities
- Review materials provided by client
  » Existing versions of products/sites
  » Other documents
- Competitive analysis
- Collect data from users: interviewing, task analysis, etc.

Deliverables
- Written reports
- Presentations
Design Process: Conceptualization

- Begin defining site
  - Take results from discovery and visualize solutions
  - Early information design

Slide by Mark Newman
Design Process: Conceptualization

I Activities
- Brainstorming (collaborative & solo)
- Sketching ideas (collaborative & solo)
- Defining site structure

I Deliverables
- Site maps
- Written reports
- Presentations
Design Process: Conceptualization

(information design: site map)

Slide by Mark Newman
Design Process: Conceptualization

(information design: site map)

Slide by Mark Newman
How Sketching Is Used

1. All designers interviewed sketch
   - Most of them downplay their sketches
   - Not inclined to show sketches to outsiders

2. Early conversion to electronic form
   - Most of them “used to do it more”
   - Once electronic, never go back

3. Collaborative sketching
   - Paper is portable and easy to share
Design Process: Conceptualization

(information design: site map + navigation)

Slide by Mark Newman
Design Process: Preliminary Design

- Discovery
- Conceptualization
- Preliminary Design
- Design
- Implementation

Generate multiple (3-5) designs
- one will be selected for development
- navigation design
- early graphic design
Design Process: Preliminary Design

1. Activities
   - Sketching designs
   - Creating mock-ups
   - *Quick and rough*

1. Deliverables
   - Schematics (a.k.a. templates)
   - Site maps
   - Mock-ups
   - Presentations
Design Process: Preliminary Design

(information/navigation design: schematic)

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Design Process: Preliminary Design

(information/navigation design: schematic)
Sketching: Information / Navigation

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Navigation Design
Design Process: Preliminary Design

(navigation design: storyboard)

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Another Use for Paper

(print-outs are shared and annotated)

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Design Process: Design

- Discovery
- Conceptualization
- Preliminary Design
- Design
- Implementation

Iteration

- Design
- Evaluate
- Prototype

- Iteration at the level of development process
- And within design stage
Design Process: Design

1. Activities
   - Creating and refining mock-ups
   - Graphic design very active
   - Prototyping

1. Deliverables
   - Mock-ups
   - Prototypes (HTML, Director)
   - Presentations
Design Process: Design

(graphic design: mock-up)

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Design Process: Implementation

1. Prepare design for handoff
   - Create final deliverable
   - Specifications and prototypes
   - As much detail as possible

- Discovery
- Conceptualization
- Preliminary Design
- Design
- Implementation
Design Process: Implementation

Activities
- Create final deliverables
- Prepare specifications and guidelines
- Prepare prototypes

Deliverables
- Specifications/Guidelines
  » written or interactive
- Prototypes (HTML, Director)
- Presentations
Graphic Design
Design Process: Implementation

(interactive specification)

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Design Process: Hand off

- Project is handed off to engineers/programmers who will implement the site.
- There may or may not be direct communication between the designers and programmers.
Duration of design phases

- Discovery: 1-2 weeks
- Conceptualization: 1-2 weeks
- Preliminary Design: 1-2 weeks
- Design: 6-8 weeks
- Implementation: 2-3 weeks

(this varies widely)
Dimensions of Communication

- Designer ← Client
- Designer ← Implementor
- Designer ← Team Member
- Designer ← Self
Design Specialties

Information Architecture
- includes management
- and more responsibility
- for content

User Interface Design
- includes testing and
- evaluation
Next Time

- Guest lecture:
  - David Steier
  - Formerly of CMU, now in charge of website design for Scient.