Web Design

cs465
Announcements

- Project status – demo in class
Why?

• You will likely be involved in Web design
• You have many of the skills necessary
• Understand similarities and differences between GUI design and web site design
• Follow a quality set of Web guidelines
  – www.useit.com is a good place to start
Want to Build This
News for November 15, 2003

CALIT 75th Anniversary Celebration

The Graduate Aeronautical Laboratories at Caltech will mark their 75th anniversary this Sunday with a celebration on November 14 and 15. Events will include presentations, tours, panel discussions, and social gatherings, capped with a gala dinner at the Athenaeum featuring guest speaker Paul Bevilaqua of Lockheed Martin.

GALEX and SIRTF Honored

Popular Science magazine named the Space Infrared Telescope Facility (SIRTF) and the Galaxy Evolution Explorer (GALEX) the "Best of What's New" in its December issue. The NASA missions were selected as projects that can change the way we think about the future. The staff selected the top 100 technical innovations in 12 categories. Science operations for both projects are based at Caltech.

Thomas Sterling: From Pico to Petaflops—The Future of Really Big Computers

Thomas Sterling, a visiting associate in the Center for Advanced Computing Research at Caltech, will discuss the future of computing and what lies beyond the exaflop era. His paper will be available for download on the Caltech website.
But Not This
Web Design Process

• Analysis
  – identify users, information needs, and tasks
  – develop, collect, and organize content

• Design
  – build, evaluate, iterate, …

• Production
  – build high-fidelity representations
In Context of TCUID

**Goals**
- Identify: Usability goals
- Users & tasks
- Content

**Methods**
- Contextual inquiry
- Task analysis
- Interviews
- Surveys
- Observations

**Artifacts**
- User descriptions
- Task descriptions
- Affinity diagrams
- Design brief

**Analysis**
- Explore design space

**Early Design**
- Sketching & brainstorming
- Heuristic evaluation
- Cognitive walkthrough
- GOMS
- Action analysis

**Late Design**
- Refine selected design
- Empirical study
- UI guidelines
- Functional test

**Implementation**
- Implement and integrate
- Empirical study
- UI guidelines
- Functional test

**Deployment**
- Gather requirements for next release
- Field study
- Critical incident walkthroughs
- Interviews and surveys
- Usability report
Compared to GUI design

• Similarities
  – design process and evaluation techniques

• Differences
  – emphasizes information seeking
  – emphasizes navigation and search behavior
  – emphasizes visual communication
  – uses page metaphor and mainly hyperlinks
Welcome to CHI2004

Welcome to CHI2004, the premier international conference for human-computer interaction. CHI2004 will be held in Vienna, Austria. Our conference theme is CONNECT, and we’ve created new opportunities for conference attendees to connect with technology, with each other, and with Vienna, a marvelous central European city of imperial tradition and modern creativity. Please join us in Vienna and take advantage of the many opportunities to network and showcase your research, design, and practice in a top international conference destination. We are pleased to announce five Special Areas for the conference, and especially encourage you to submit work on the following topics.

Special Areas

Ambient Intelligence

In Europe the vision of Ambient Intelligence (AmI) has been adopted to guide and shape EC-funded research activities on information and telecommunication technologies for the coming 10 years. HCT will be one of the central building blocks of the upcoming AmI era.

More Info

European HCI Research

CHI2004 takes advantage of its central European location to focus on HCI research by and for the European community. We offer a stage for European HCI research and urge strongly encourage European research groups to submit reports on their work to the various categories of the conference.

More Info

Games

Games represent one of the most diverse set of challenges and user experiences in our field with innovations in interface design, input devices, graphics, social communication and development.

More Info
Elicitation

• Elicit communicative goals of client
  – assess whether web is right medium

• Define project scope
  – estimate how much content, time, and cost

• Identify usability goals
  – how to evaluate success of project
Analysis

• Analyze users
  – age group, skill level, access, information needs

• Analyze tasks
  – understand what content users want and need
  – understand how users get that content today
Analysis (cont.)

• Develop, collect, and organize content
  – information architecture

• Structure information
  – write an information item on a post it, paste on a wall, and iteratively refine the structure
  – sketch a tree structure where each node is an information item

• Capture history as structure evolves
Example 1

[Newman and Landay, 1999]
Example 2

- Beyer and Holtzblatt
Example 3

This roadmap is a final outline of content for the educational Freestyle Surgical Educational CD to be given to customers as an enhancement to the formal training courses.
Early Design

- Sketch navigation template
  - primary and secondary navigation

- Sketch layout for main page and a few second and third level pages

- Sketch scenarios for primary tasks
- Newman and Landay
Evaluate Early Design

- Cognitive walkthrough
- Heuristic evaluation
- Formative evaluation
- GOMS or action analysis
Late Design

- Mockup interaction scenarios in HTML
  - not entire site, just the main parts
- Use prototype to communicate behavior
  - navigation, search, registration, ordering sequence, etc.
- Gain feedback from team and client
- Use a basis for empirical user study
Evaluate Functional Prototype

• Empirical user study
Production

• Develop each page for the entire site
• Conduct final usability tests
• Refine as necessary and deploy

• HTML is simple, but programming a large site takes time, skill, and effort
Project Team

• Project manager interfaces with client, defines scope, assigns milestones
• Information architect develops information structure (information design)
• Graphic designer helps with information design, defines visual design & navigation
• Developer provides feedback on feasibility and develops the code

• One person may fill more than one role and fill different roles on different teams
Notes on the Design Process

• Short timelines and small budgets
  – important to communicate what can be achieved

• Client must “sign-off” after each iteration
  – must communicate effectively

• Client often does not understand Web design, feels like an outsider looking in
  – design team should go to client

• Perceived as “simple” and “low-investment”
Designers Need Good Tools

- Designers feel pressure to use computer-based tools early in the design process
  - short timelines require rapid design
  - get from concept to prototype quickly
  - must show clients something that looks “professional”

- Using computer tools hinders creativity
  - spend too little time exploring design alternatives and refinements (linear working interface)

- Develop computer-based tools that better support the early design process
Take Home Exercise

• Inspect ACM SIGCHI Conference website

• Think about the process that a design team went through to develop this site
  – who are the target users?
  – what tasks will those users perform?
  – how was information collected and organized?
  – what do you think of the navigation scheme?
Take Home Exercise

• Read Nielsen’s Top Ten Web Usability Guidelines