USER INTERACTION DESIGN GUIDELINES

Chapters 2

TOPICS:

• Organizing usability issues: The User Action Framework
• Selected design guidelines, with examples
• Guidelines specifically for Web design
• Usability inspection
• In-class exercises on guidelines

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7.1 Web Intro
THE WEB IS HOT!

- "Every fourth person on Web is buying something right now."
- "The Internet had more users in its first five years than the telephone did in its first thirty."
- "This month another 18 million people will go on-line."
- "E-mail already outnumbers regular mail by nearly ten to one." [Source: www.cisco.com/warp/public/749/ar98/solutions/index.html]
- "Every business that wants to survive is going to be a digital business." [R. Shapiro, Dept. of Commerce, June 1999]
- Revenue per Internet employee averaged $250,000 in 1998 vs. $160,000 for non-Internet workers [Source for more Internet economic data: www.internetindicators.com]
THE WORLD OF THE WEB!

• 1998: Internet generated $301 billion in revenue and 1.2 million jobs [Univ. Texas & Cisco Systems study, June 1999]
  
  Based on interviews with 3000 US companies

* Compared to $8.6 trillion for US economy
* Compared to $350 billion for US carmakers

• Some uses of Web sites
  
  * Information sharing
  
  * E-commerce
  
  * Communication and collaboration
  
  * Entertainment

Family Circus ->->->>

7.3  Web Intro
So why do people shop on-line?!
ON-LINE SHOPPING

• People shop on-line [e-mail survey by Consumer Electronics Manufacturers, USA Today Snapshots, 18 May 1999]

* For convenience: 65%
* To window-shop: 61%
* To research purchase items: 59%
* To buy something specific: 41%
* Just for fun: 40%
* For novelty: 5%

• Main deterrent: Security worries
IMPORTANT FACTORS - ON-LINE PURSHASING

• Factors (ranked) most often cited as influencing decision to buy on-line [Tilson, Dong, Martin, & Kieke, 1999]

* Credit card security

* Easy return/exchange policy

  first two not related to user interaction, interestingly, but usability can help allay fears and uncertainty with good design of feedback, etc.

* Detailed item descriptions

* Pricing

* Personal information security

  again, not directly related to user interaction
IMPORTANT FACTORS - ON-LINE PURSHASING

* Pictures
* Simple search methods
* Appealing graphics
* Availability of product
* Categories easily accessed
* Consistent look
* Easy-to-control functions
WHY USE THE WEB?

- Low barriers to entry
- Easy "publishing"
- Easy distribution
- Relatively low cost of Web presence
- Novelty (?!)

7.8 Web Intro
WHY USE THE WEB?

• Example: Amazon.com – What user experiences at their site is Number 1

* Fundamental issue
  - Amazon was never "bricks and mortar" company
  - Its Web site is all it has!

* "One click" feature

* Trust
  It's easy to lie on the Web!

* Reliability of information

* Profiling of customers
  It's easy to annoy on the Web! Buy cookbook as a gift, logon later, and you're bombarded with cookbook suggestions
ARE CURRENT WEB SITES USABLE?

• You decide!
* Finding information
* Currency of information
* Use of links
* Layout of screens
* Cool graphics and special effects
* Use of color
* Multiple browsers
* Response time
SO WHY ARE WEBSITES SO LOUSY?

• "We need a Web presence!"
  * But Web presence does not equal effective, attractive Web site

• "We updated our site last month!"
  * But your organization has probably changed some since then

• "Anyone can build a Web site these days!"
  * But that site will rarely be usable; most people don't know Web user interaction design guidelines

Anyone can be both author and publisher, with no review process!

• "How hard can this be? We don't need to bother with a real development process!"
  * But Web development is, from a development methodology view, basically an interactive software application, and needs to follow a software and usability engineering process
SOME USER CHARACTERISTICS INFLUENCING WEB DESIGN

• Most users

* Don't want to read lots of text on-line
* Look first for key words and links
* Are "casual" users, browsing a site
* Don't browse aimlessly

User vs. Surfer; what attracts surfers doesn't help users

* Are interested in small part of a site
* Are put off by sloppy layout, poor grammar, misspellings
* Are annoyed by flashing, banners, etc.
* May not be English-speaking or US citizens/residents
* May be over 40!
* Will get lost on the Web!

Although important, we will not address internationalization, disabilities, etc.
USABILITY PROBLEMS WITH WEB SITES

• General usability problems:
  * Selecting wrong button, link, menu item, etc., by accident
  * Selecting wrong button, link, menu item, etc., when user thought it was the correct one
  * Clicking wrong number of times
  * Typos
  * Clicking on unlinked text or icon
  * "Lost in cyberspace"

• Usability problems specific to e-commerce
  * Do not clearly communicate if and how users must register to shop
  * Do not effectively communicate how to select and add item to shopping cart
  * Do not provide effective feedback on what is currently on shopping list (in cart)
  * Do not provide easy navigation from shopping list to other areas of site

[Factors and Principles Affecting the Usability of Four E-commerce Sites, Tilson, Dong, Martin, & Kieke, Proc. Conf. on Our Global Community, 1999]
WEB SITE DEVELOPMENT TEAM ROLES

- Leader
- Interaction designer(s)/usability specialist(s)
- Application domain (content, subject matter) expert
- Marketing representative
- Programmer(s), implementers
- Writer(s)
- Graphic designer(s)
- Audio/video specialist(s)
SOME QUESTIONS TO DRIVE WEBSITE DESIGN

• In early meetings, decide and write down, answers to at least the following questions

* Why does this project need to use the Web?

* Who is our audience/market?

* What are our users trying to accomplish?

* What is our competition doing?

* What are our business goals for the site?
  
  e.g., customer satisfaction for long-term loyalty

  e.g., to increase revenue by 20% in one year

* What are our usability goals and priorities for the site?

  e.g., fast service vs. slow deliberate interaction to avoid errors (such as for airline tix purchase)