WELCOME TO THE WORLD OF THE WEB!

• "Every fourth person on the Internet 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."


• "Every business that wants to survive is going to be a digital business." [R. Shapiro, Dept. of Commerce, June 1999]

• Internet economy is nearly as large as the economy of Switzerland

• 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]
WELCOME TO THE WORLD OF THE WEB!

• 1998: Internet generated $301 billion in revenue and 1.2 million jobs [Univ. Texas & Cisco Systems study, June 1999]
  * Compared to $8.6 trillion for US economy
  * Compared to $350 billion for US carmakers

• 174.5% higher revenue than 1997

• Accounts for more than 40% of jobs added by entire US economy

• 1994: Internet revenue less than $5 billion

  * Based on UT/Cisco study, will pass this amount by mid-summer 2000
WELCOME TO THE WORLD OF THE WEB!

• Internet economy is doubling every nine months [IBM Institute for Advanced Commerce, 1999]

• E-commerce generated 482,000 jobs in 1998

• Some uses of Web sites
  * Information sharing
  * E-commerce
  * Communication and collaboration
  * Entertainment
PHYSICAL VS. VIRTUAL SHOPPING

Clerk with friendly advice

Help or search button

Familiar store layout

Maze of menus, links, site maps

Touch, smell, taste, see, hear

See, hear

Immediately availability

Delayed gratification

So why do people shop on-line?!
VIRTUAL 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
VIRTUAL SHOPPING

• Example: Using airline Web site [Research survey on airline sites, USA
  Today Snapshots, 20 May 1999]

  * Average airline Web site visitor is
    - Male: 63%
    - Age 25 - 54: 59%
    - Income of $75,000: 52%
    - On-line two or more years: 68%

• At the site, they
  * Check availability of flights: 42%
  * Buy tickets: 28%
  * Find general information: 27%
  * Check frequent flyer program: 27%
  * Check flight status: 13%
  * Surf/browse: 9%
  * Access links: 8%
  * Find airline contact information: 5%
  * Find job opportunities: 3%
WHY USE THE WEB?

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

• 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
  * Reliability of information
  * Profiling of customers
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

• "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
  
  * 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!
GENERAL USABILITY PROBLEMS
WITH WEB SITES

• 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"
TYPICAL USABILITY PROBLEMS
WITH E-COMMERCE SITES

• 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]
IMPORTANT FACTORS AFFECTING ON-LINE PURCHASING

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

* Credit card security
* Easy return/exchange policy
* Detailed item descriptions
* Pricing
* Personal information security
* Pictures
* Simple search methods
* Appealing graphics
* Availability of product
* Categories easily accessed
* Consistent look
* Easy-to-control functions
WEB SITE DEVELOPMENT TEAM ROLES

• Leader

• Interaction designer(s)/usability specialist(s)

• Application domain expert

• Marketing representative

• Programmer(s)

• Writer(s)

• Graphic designer(s)

• Audio/video specialist(s)
SOME QUESTIONS
TO DRIVE WEB SITE 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?
  * What are our usability goals and priorities for the site?