Web UI

Môn: Thiết kế giao diện

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Outline

- Prevalence and importance of Web design
- Text and Hypertext
- Web Usability considerations
- Guidelines and Tips on Web UI design
- UI Hall of Fame and Shame

Prevalence of Internet

- **Internet users (today)**
  - World 3.6 billion; Vietnam 54 million
  - Facebookers: 2.2 billion monthly active users (MAU)
- **Websites: over 1 billion**
- **Internet is now a dominant activity of a day**
  - ❑ Average person spends
    - 2 hours/day on social networks
    - 9 hours/day on Internet
  - ❑ Teens spend about 27 hours/week online

  Source: ww.internetlivestats.com

Importance of Web Design

- Millions of websites on Internet
    - and growing everyday, even faster
    - some are visited often, some to a small audience
- Purpose of websites
    - communication
    - education/information
    - e-commerce/e-business
    - entertainment
    - …
- Good Web site design can lead to good return on investments

Importance of Web design (cont'd)

- Two most elusive goals of effective Web design
    - user satisfaction and return on investment (ROI)
- Usability is still the critical issue for Web design
    - if your site is difficult to use - people leave
    - if it is not clear what is offered - people leave
    - if it is hard to read - people leave
    - if it is unattractive - people leave
    - if it is boring - people leave
    - if it doesn't work the way they are used to - they leave
    - if they get lost - they leave
    - if they get frustrated - they leave

Source: "*User interface design and evaluation*", Debbie Stone et al., 2005

Importance of Web design (cont'd)

- A story - NY Times, Aug 30 1999, on IBM Web site
  - *"Most popular feature was … search … because people couldn't figure out how to navigate the site."*
  - *"The second most popular feature was the help button, because the search technology was so ineffective."*

- After redesign
  - use of the "help" button decreased 84 percent
  - sales increased 400 percent

Importance of Web design (cont'd)

- $300 million button, reported by Jared Spool
  - http://www.uie.com/articles/three_hund_million_button/

- Jakob Nielsen estimates 135% improvement for 10% budget spent on usability
  - measured in sales, site traffic, productivity, use of features

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Text and Hypertext

- ## Text

  - imposes relatively strict linear regression on the reader

Page 1	Page 2	Page 3	Page 4	Page n
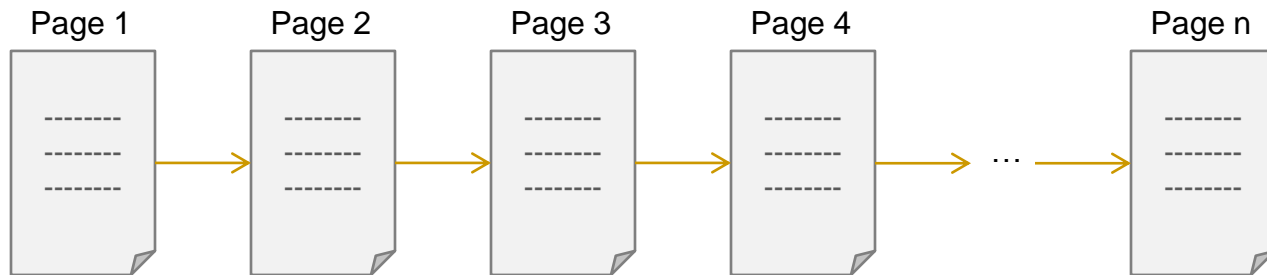
  - structure and order of ideas are dependent on the author

Text and Hypertext (cont'd)

- Hypertext
  - a dynamic organization of information through links and connections (hyperlinks)
  - non-linear structure
    - blocks of text (pages)
    - links between pages create a mesh or network
    - users follow their own path through information

Homepage

External link
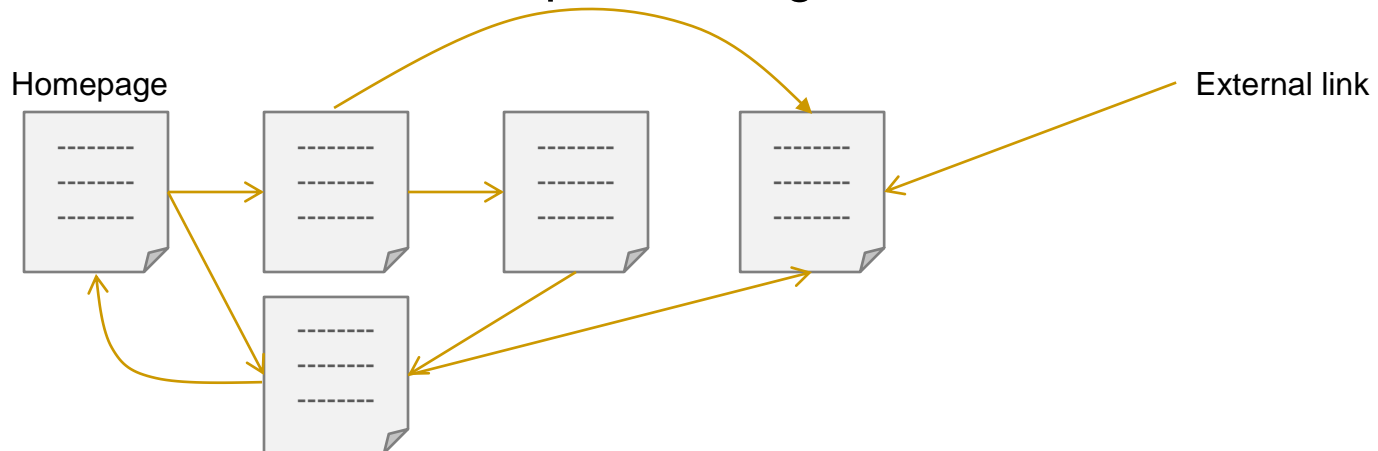
Text and Hypertext (cont'd)

- Hypermedia
  - Not just text, but also includes
    - Videos
    - Photographs
    - Audios
    - Links
    - Applications
    - …

Text and Hypertext (cont'd)

- Advantage of non-linear structure
  - very powerful
  - users follow their own path through information
- Challenges
  - hugely expanded connectivity
  - consequent loss of logical structure
  - cognition and content
    - fragmentary information – no integration → confusion
  - navigation and structure
    - hyperlinks move across structure – where am I?
  - → search and delivery methods are important

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Usability for Web Design

- Many usability principles applicable to Web UI design
    - Iterative design, user-centered design
    - Modeling approaches
    - Development principles, rules and standards
    - Information layout and perceptual factors
    - Evaluation methods
- But Web UI has restrictions different from traditional UI design

Usability for Web Design (cont'd)

Traditional Desktop-Based UI vs. Web-based UI

Traditional Desktop-Based UI	Web-based UI
Users are more loyal	You cannot control user. People will leave if your website is difficult to use
You control each pixel	You give up control to meet client/server hardware/software needs
You know for what system you are designing	Your result could appear on WebTV!
The designer can control where the user goes and when	The user has more control of their navigation, and may only stay for a few moments!
You are part of an enclosed experience	Obviously not the same for Web design!

Usability for Web Design (cont'd)

- The Web is distributed
  - Web servers, web browsers, web pages
- Diverse devices
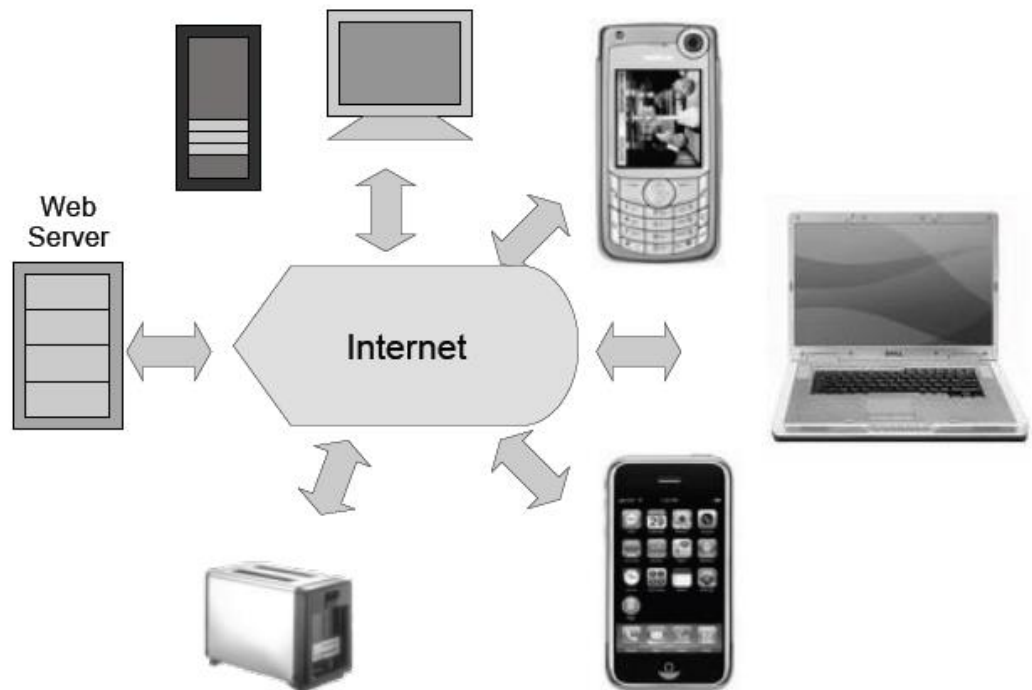
Usability for Web Design (cont'd)

- Diverse users

"On the Internet, nobody knows you're a dog."

Specific Web Usability Considerations

- **Network issues**
    - Bandwidth
    - Timing, latency
- **Architectures**
    - Information architecture
        - Information taxonomy
        - Content management
    - Web UI architecture
        - Task navigation
        - Appearance design

Network issues

- Bandwidth
  - how much information per second
- Latency
  - how long it takes (delay)
- Jitter
  - how consistent is the delay
- Reliability
  - some messages are lost
    - need to be resent → increases jitter
- Connection set-up
  - need to "handshake" to start

Network issues (cont'd)

- **Design implications**
  - Bandwidth
    - Consider download time
    - Different media qualities: different formats
  - Connection time
    - Big files vs. small multiple files
  - Latency
    - Giving feedback
      - E.g., using progress indicator
    - Breaking large service into small pieces

Many ways to show progress
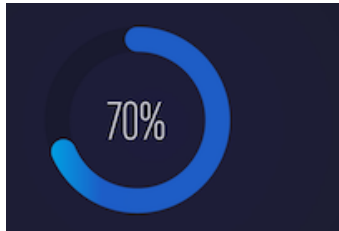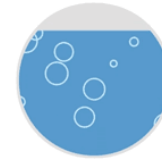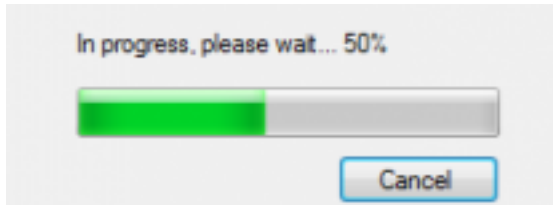
Web Development Architectures

Information Design

Navigation Design

Graphics Design

Information architecture
- Information taxonomy
- Content management

Web UI architecture
- Task navigation
- Appearance design
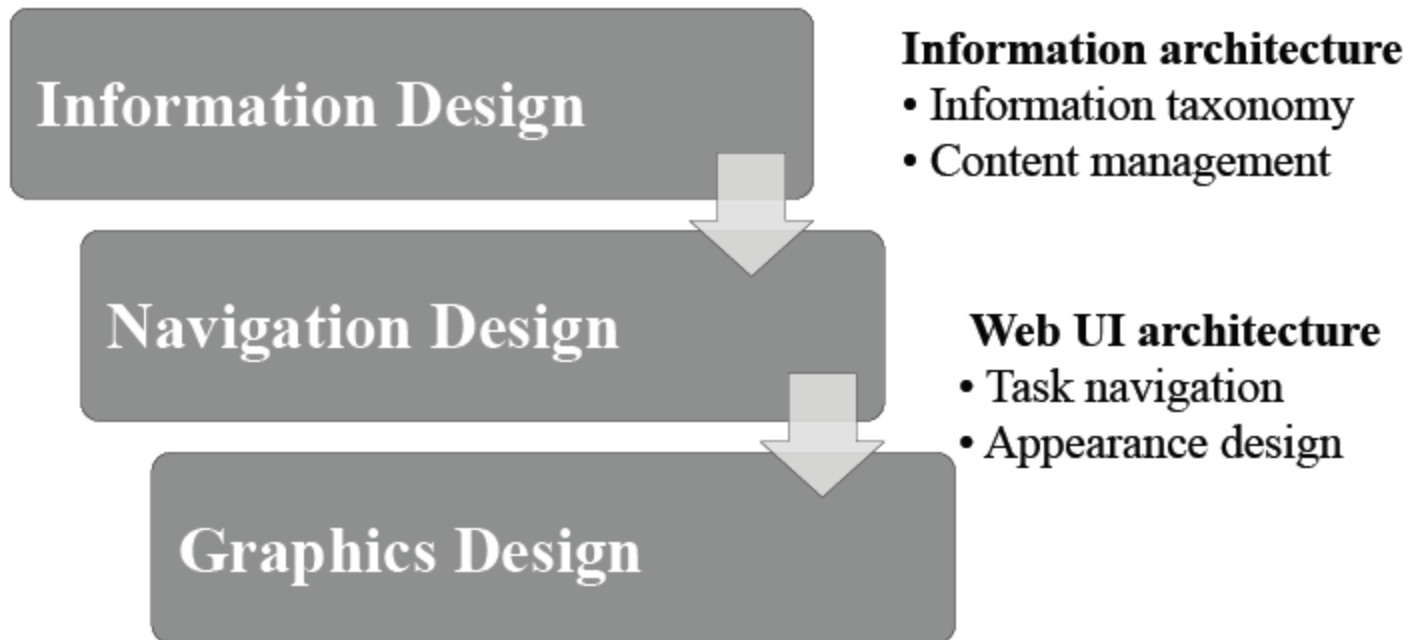
Information Architecture

- **Information architecture** is a combination of organizing a site's content into categories and creating an interface to support those categories

- **Information taxonomy** is the core of information architecture

  - refers to the effective structuring of content within a defined scope to facilitate easy and accurate access

Information Architecture (cont'd)

- **Information taxonomy (cont'd)**
  - ❑ Presents Web content with logically grouped topics or categories so a site visitor can navigate and locate information easily
  - ❑ Helps better Web development
    - ■ content management
    - ■ design process
    - ■ search process
  - ❑ Even the most efficient search engine cannot completely overcome problems caused by
    - ■ poorly conceived information taxonomy
    - ■ or completely absent information taxonomy

Information Architecture (cont'd)

- Information taxonomy

Web UI Architecture

Information taxonomies & Content management

High-level information layout

Sitemaps

Storyboards

Interaction sequence, min details

Detail Info layout, page structure

Schematics

High-fidelity presentation of page

Mockups

Iteratively testing and refining

Products
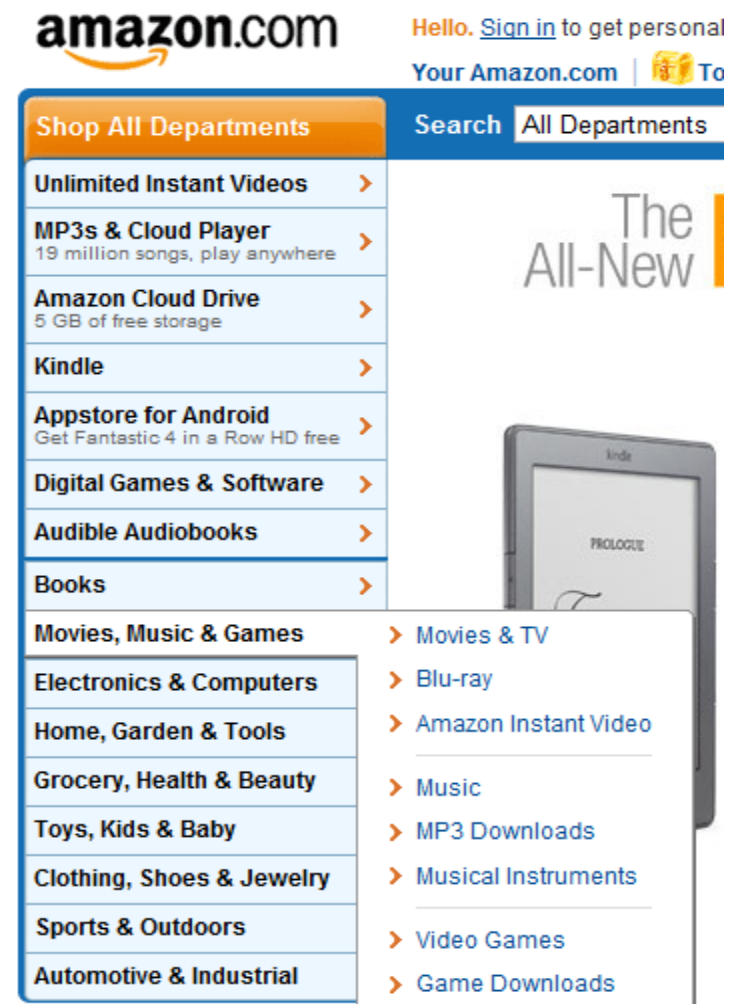
Launch and Maintenance
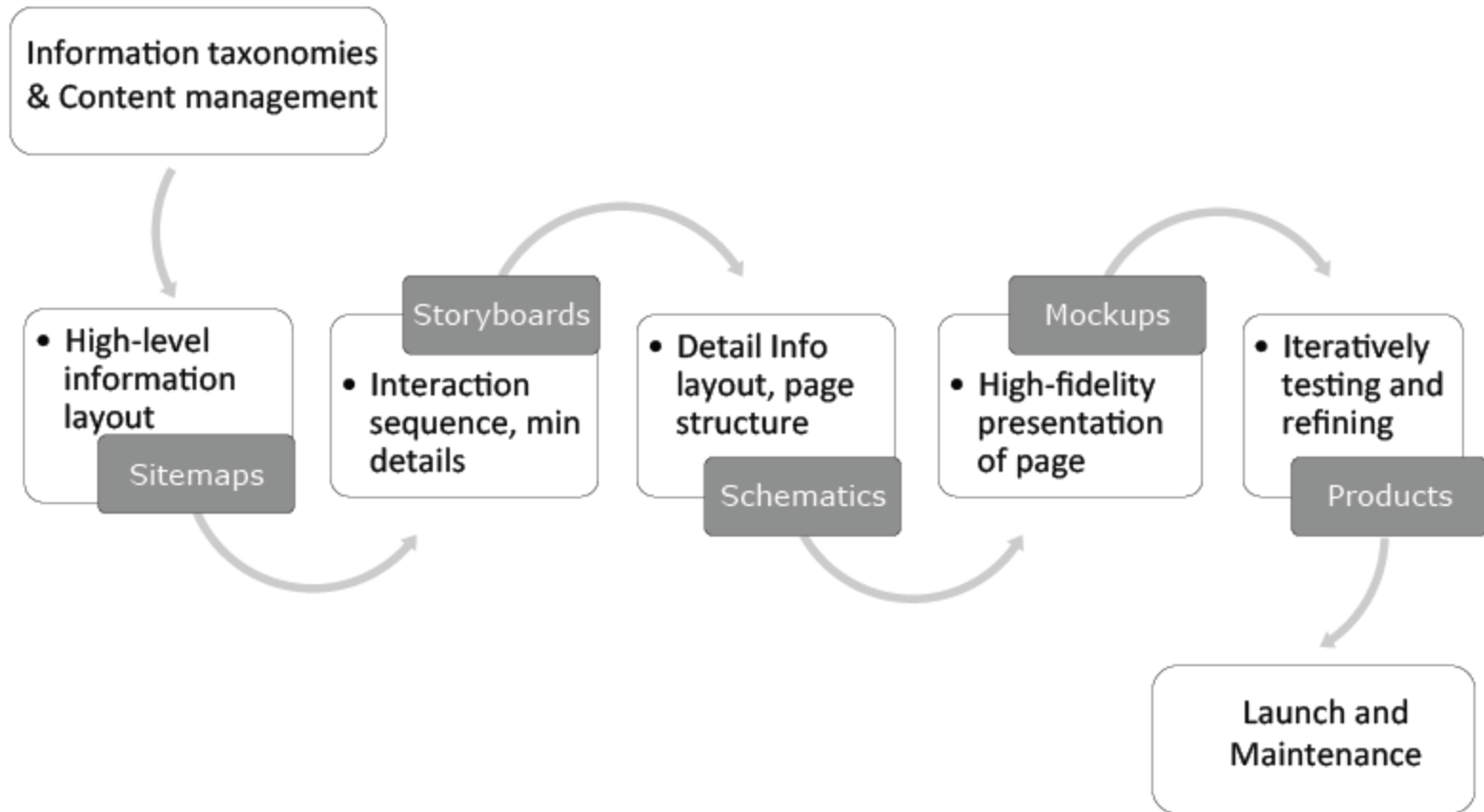
Web UI Architecture (cont'd)

- **Site Maps**
  - ❑ Site maps organized **hierarchically**
    - ■ used as planning tool
    - ■ provide the designer a high-level view of entire site
  - ❑ Use textural labels, diagrams, flowcharts.
  - ❑ Pay special attention on the paths of navigation through the information space
  - ❑ Tools used
    - ■ Hand-drawn (small site)
    - ■ PowerPoint
    - ■ Visio or Illustrator

Web UI Architecture (cont'd)

- ## Site Maps (cont'd)
  - ❑ Information taxonomy is used as input to design site maps
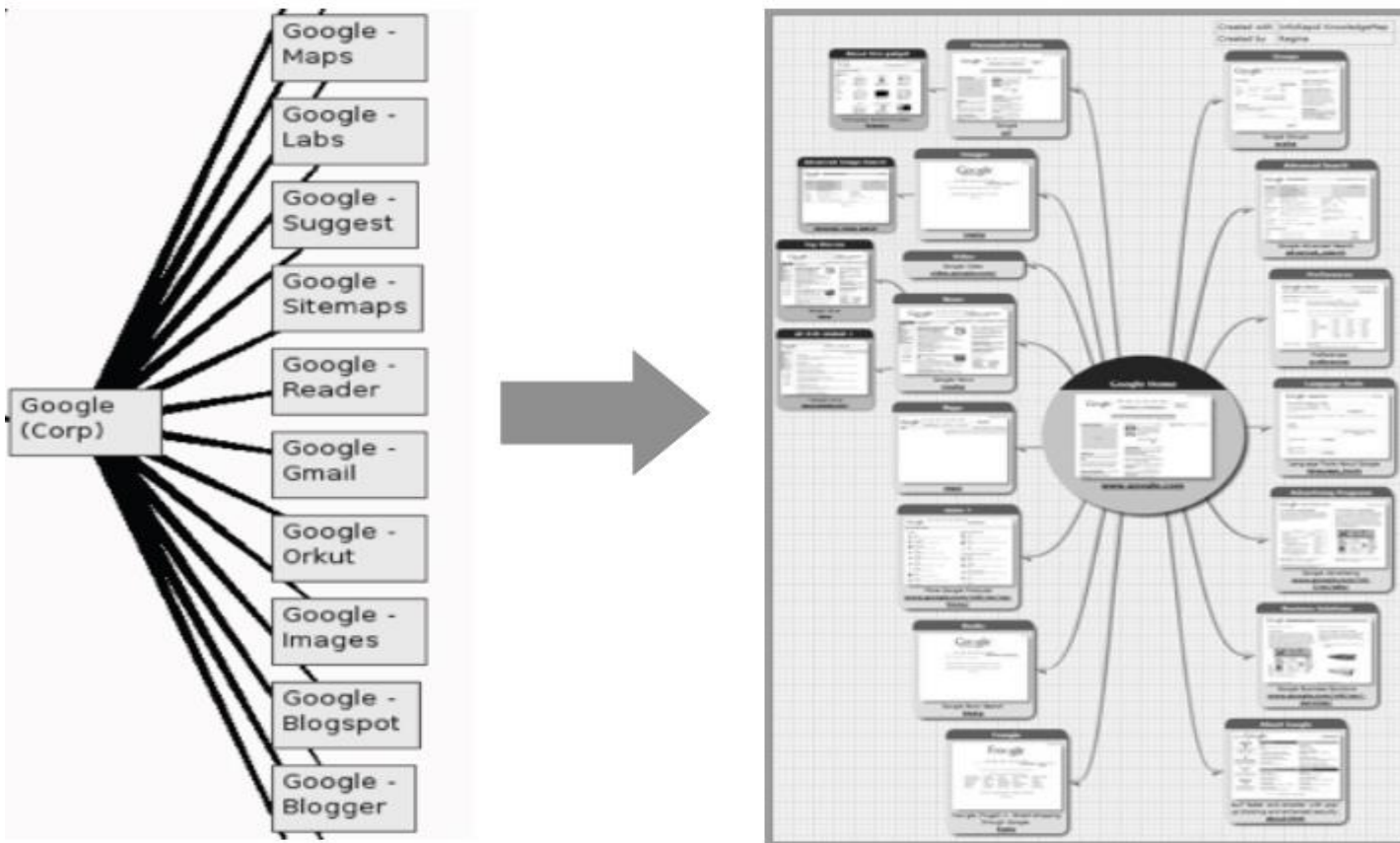
Web UI Architecture (cont'd)

- ## Storyboards

  - ❑ Provide a concrete presentation of **interaction sequence** for each page, item, or subtopic

  - ❑ Tools used

    - ■ Hand-drawn (small site)

    - ■ PowerPoint, Visio or Illustrator
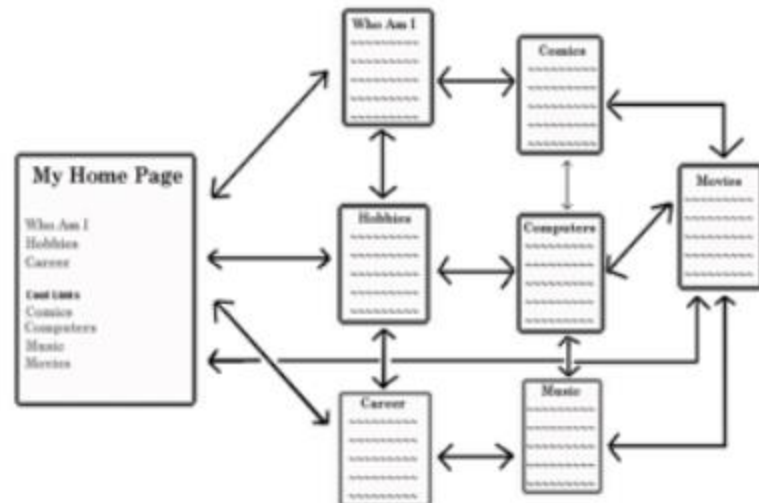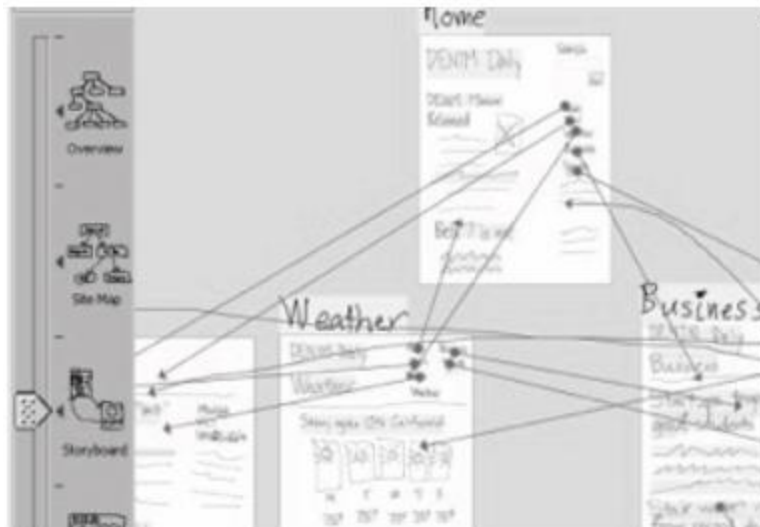
Web UI Architecture (cont'd)

- ## Schematics
    - ❑ Provide detailed navigation content of pages, page layout and structures
    - ❑ Consider graphics elements

Web UI Architecture (cont'd)

- ## Mockups and products
  - Detailed and correct presentation of content

Excercise

- **Work with your teammates**

- **Tasks**

  - Identify information taxonomy of HCMUS FIT's website

    - For teams designing web, use your website

  - Design a sitemap to reflect the information taxonomy

  - Design layout for three screens (must include the homepage)

  - The judges will evaluate

- **Teams will show and vote**

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Top 10 Mistakes in Web Design (from Jakob Nielsen, 2011)

1. Bad Search
2. PDF Files for Online Reading
3. Not Changing the Color of Visited Links
4. Non-Scannable Text
5. Fixed Font Size
6. Page Titles With Low Search Engine Visibility
7. Anything That Looks Like an Advertisement
8. Violating Design Conventions
9. Opening New Browser Windows
10. Not Answering Users' Questions

Ten Good Deeds in Web Design (Jakob Nielsen)

- 1. Place the **name and logo** on every page and make a link
- 2. Provide **search** if the site has more than 100 pages
- 3. Write straightforward and simple **headlines and page titles**
- 4. Structure the page to **facilitate scanning**
- 5. Use **hypertext to structure** the content space into a several subtopics
- 6. Use product **photos**, but avoid cluttered and bloated pages
- 7. Use **relevance-enhanced image reduction** for small images
- 8. Use **link titles** to provide users with a preview of where will take them
- 9. Ensure all important pages are **accessible for users with disabilities**
- 10. Do the **same as everybody else**

Jakob's Law: "Users spend most of their time on other sites"

Source: http://www.useit.com/alertbox/991003.html

Some Web Design Guidelines

- Site tourists: you cannot control the user
- Loyal visitors: you almost want to say "Please bookmark me"
- Avoid frames
- People will not "hang around" if they see the site is not maintained current
- Users are impatient
- Reduce scrolling, especially at the home page
- Avoid animation unless it has a purpose, like showing how a game is played
- Don't animate forever
- Don't do "Enter Here"
- Limit the number of colors used

Some Web Design Guidelines (cont'd)

- A site needs to make clear what it is supposed to do and how it is organized

- Don't match other media, e.g. brochures, TV ad, and push that onto the web page. Do the web first

- Link wisely, not everything. Also, don't just say "click here" without a highlight or reference

- Tell people where you are. Provide navigation buttons and/or site maps.

- On-line survey & forms need smooth interaction, "clear" button, easy to back up and correct, pull down choices, etc.

- Strong metaphor can be "over cute"

- Spend a moment on URL design

- White background preferred with easy-to-read (dark) lettering

Top 10 Guidelines for Homepage

1. Include a One-Sentence Tagline
2. Write a Window Title with Good Visibility in Search Engines and Bookmark Lists
3. Group all Corporate Information in One Distinct Area
4. Emphasize the Site's Top High-Priority Tasks
5. Include a Search Input Box
6. Show Examples of Real Site Content
7. Begin Link Names with the Most Important Keyword
8. Offer Easy Access to Recent Homepage Features
9. Don't Over-Format Critical Content, Such as Navigation Areas
10. Use Meaningful Graphics

Tips on Web writing

- **People rarely read Web pages word by word**
  - instead, they scan the page, picking out individual words and sentences

- **Good Web pages often employ scannable text**
  - Highlight keywords
  - Use bulleted lists
  - Have one idea per paragraph

Source: http://www.feng-gui.com
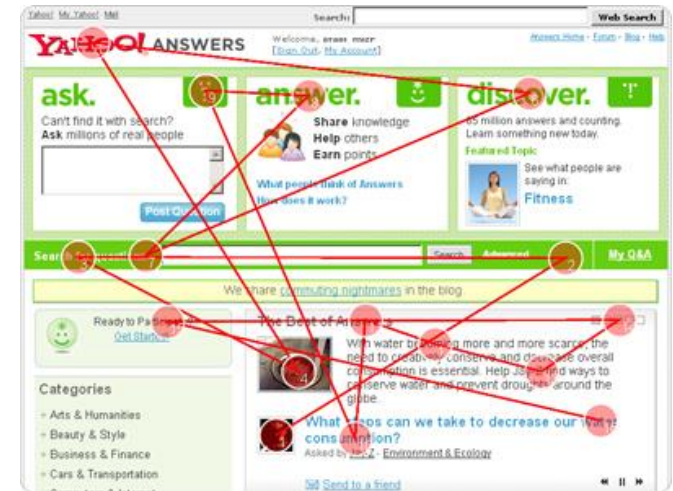
Tips on Hyperlink and Navigation

- Apply HCI rules
  - Where & what of navigation in hyperspace
    - Where you are?
    - Where you're going (or what will happen)?
    - Where you've been (or what has been done)?
    - What you can do now?

Tips on Hyperlink and Navigation (cont'd)
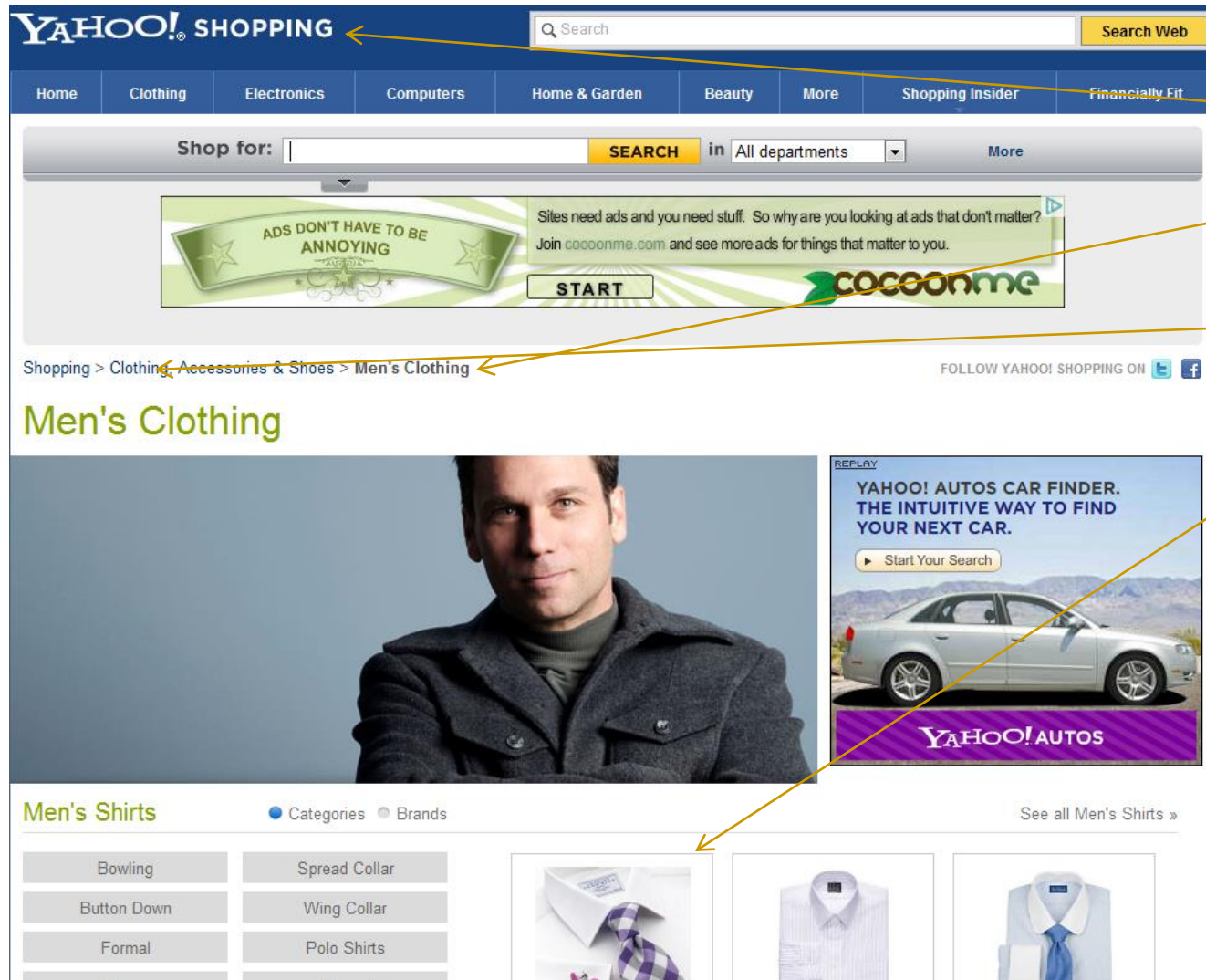
Where you are?

Where you're going?

Where you've been?

What you can do now?

Tip on link: informative title

- Basic Rule – helping users to make an informed decision before they click

Tips on graphical elements

- **Apply general UI principles**
  - Color should be used with care
    - Don't use many colors in text unless it is a link
    - Don't use non-standard link colors
    - White background preferred with easy-to-read lettering
  - Font should be used carefully
    - Don't use too small fonts, non-standard, frozen size
    - Avoid clutter and low contrast and resolution
  - Image/video/animation
    - Avoid "eye candy" unless it supports a message
    - Motion attracts attention. Useful if important, otherwise distracting
    - Optimize pages for loading speed

Trang chủ của báo Tuổi trẻ

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www.gdt.gov.vn

UI Hall of Fame or Shame

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Source: http://www.webpagesthatsuck.com

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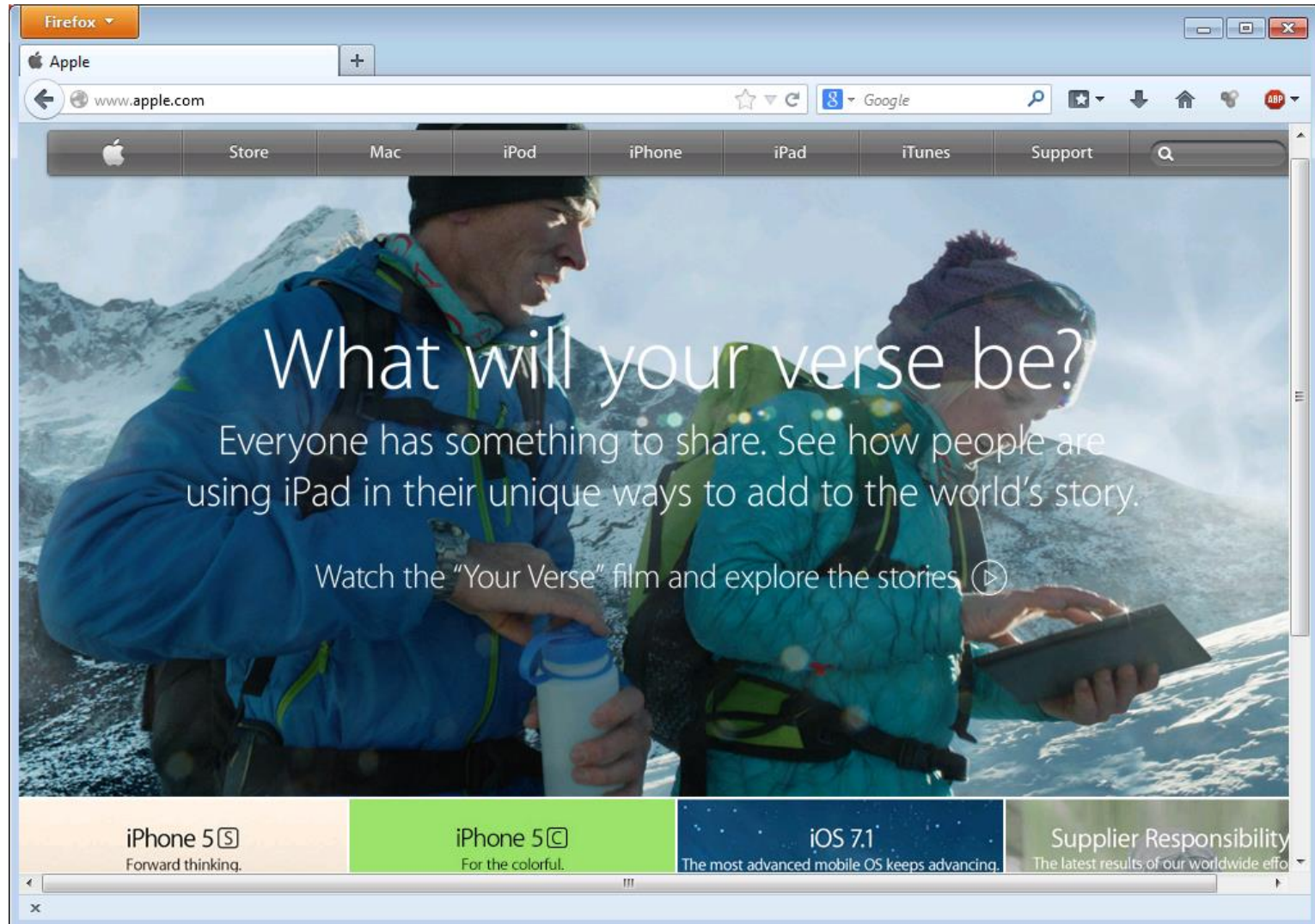
UI Hall of Fame or Shame

UI Hall of Fame or Shame

This news outlet is famous for its phonetic transcription.

"Đoàn đại biểu QH Vương quốc Thái-lan do Ngài **Sổm-sặc Kiệt-sụ-ra-nôn**"

Videos

- **Ten must see usability videos**
  - http://www.usefulusability.com/10-must-see-usability-videos/

References

- "Designing Web Usability", Jakob Nielsen, 2004
- http://www.w3.org/
- http://www.ology.org/tilt/cgh/
- http://usableweb.com/
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- http://www.useit.com/
- http://www.webpagesthatsuck.com/