

Internet and New Media (INM)

Chapter 01 – The Web

Victor M. Garcia-Barrios
IICM @ TUGRAZ

Agenda

Web Technology

Web Page Design

Checkpoint 1

Please go to this Web site: **fbr.io/UHTBT**

Enter the code and join the voting: **UHTBT**

Let's see..

The Internet

[Powell 2002]

Gets you connected!

- Is not the Web.
- **Internet is the communication network.** The infrastructure connecting computers worldwide.
- Is provided by an ISP (Internet Service Provider).
- Information travels over the Internet via “Protocols”.
- Is the technological Platform for the Web.
- “You access Web information over the Internet”

The Web

[Powell 2002]

Informs you!

- **The Web is a Service that relies on the Internet!**
- The Web uses the HTTP protocol to transmit data (over the Internet).
- The Browser visualises Web content for you.

- There are other Services relying on the Internet.
 - FTP is a Service. (FTP, File Transfer Protocol)
 - Email is a Service. (SMTP, Simple Mail Transfer Protocol)
 - The USENET relies also on the Internet and is the Web for Newsgroups. (NNTP, Network News Transport Protocol)

The Web Medium

[Powell 2002]

Core Web Technologies

- Internet Adress: URI (Uniform Resource Identifier)
- Protocol: HTTP (Hypertext Transfer Protocol)
- Markup languages (HTML, XHTML,..)

- Further
 - Style sheet technologies (CSS, XLS,..)
 - ECMASCRIPT (Javascript)
 - Multimedia (Images, Sound, Video)
 - Programming technologies (CS, SS, network protocols): Web Servers and Browsers

The Web Medium

[Powell 2002]

Web Browser

- The interpreter of Web sites.

The Web Medium

[Powell 2002]

Markup Languages

- Markup technologies define the structure and possible meaning of page content.
 - *Markup languages do not define the look of Web pages!*
- HTML (HyperText Markup Language)
 - Defined by a SGML-DTD (Standardised General Markup Language - Document Type Definition). → Tags/rules are well-defined (W3C) → Sloppy usage!

The Web Medium

[Powell 2002]

Style Sheet Technologies

- The look of pages should be controlled by design elements, not by structural elements!
 - i.e. use CSS and not HTML for this purpose
- CSS
 - Cascading style sheets specify rules that define the presentation of page elements.
 - CSS rules define visual aspects of page objects (e.g. color, size).
 - A combination of styles is possible depending on tag usage → „cascading“.

The Web Medium

[Powell 2002]

Multimedia (Images, Sound, Video)

■ Images / Animations

- GIF (Graphics Interchange Format), JPEG (Joint Photographic Experts Group), PNG (Portable Network Graphics), SWF (Flash), SVG, VML, BMP, TIF, WBMP (Wireless BMP), ..

■ Sound

- WAV (WAVEform), MP3 (MPEG Level 3), RM (Real Audio), MIDI (Musical Instrument Digital Interface), WMA (Windows Media Audio), SWF (Flash), ..

■ Video

- AVI (Audio Video Interleave), MOV (Apple's QuickTime Format), WMV (Windows Media Video), RM (Real Platform), SWF (Flash), ..

Elements of Page Design

[Powell 2002]

Fundamental components

- Pages and Layout
- Text
- Color
- Images
- GUI Widgets and Forms

Elements of Page Design

[Powell 2002]

Pages and Layout

- Web page?
 - 1 page = 1 URL = many frames(?) → and now AJAX.. → better use the term **screen!**
 - a *chunk* of a large structure (i.e. of a Web Site)
- Page size?
 - 640x480 = low resolution (typical worst-case PC resolution); 800x600 = standard res. (probably a *safe* assumption); 1024x768 = high res. (limit before serious usability problems)
- Entrance page?
 - E.g. the home page is the main entry to a site and should be designed differently than the rest. Remember: any page in a site can serve as an entrance page if the user knows its URL.

Elements of Page Design

[Powell 2002]

Text

- Fonts refer to the style of the type used on a computer.
 - Origin: publishing industry, where it referred to a particular size of a particular typeface.
- Use CSS to change/define/manipulate look of text.

Elements of Page Design

[Powell 2002]

Color

- To ensure the appropriate color is produced, always use a hexadecimal value over the named color (except for basic VGA colors: white, black, red,...)

Color name	HEX - value
silver	#c0c0c0
olive	#808000
navy	#000080

- To safely break the 216-color barrier, use hybrid colors → 216 instead of 256? → 40 color definitions are different between PC and MAC.
 - Method: Take 2 or more *Web-safe colors* and combine them in some pattern (checkerboard or stripes) to trick the eye into seeing a different color.

Elements of Page Design

[Powell 2002]

Images

- Use GIFs for icons and JPEGs for photos.
→ In the present: use PNGs !
- Always use the *height* and *width* attributes with the tag. But, avoid using these attributes to resize images with HTML, as distortion may occur.
- Always store your images in a separate directory (usually *../images/*).
- Name your images in a logical fashion that groups them by purpose or usage.

Elements of Page Design

[Powell 2002]

GUI Widgets

- GUI widgets
 - window, alert, confirm, prompt, form, text field, password, textarea, check box, radio button, pull-down menus, scrolled lists, push button, reset button, submit button, image button, file upload control,..
- Do not go full screen without asking the user first.
- Set the length of text fields to reasonably fit data being provided.
- Always select an initial radio button by default.
- Advanced GUI Widgets
 - Samples: DHTML menus, tabbed dialogs, sliders, context menus.

Hands-On the Web

Web Design/Programming for Dummies

Web Template

Local Environment

Programming for the Web

Many Browsers, one code

Source code (text editor)

Getting real

FTP and Web Server

Remote Environment

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Let's see..

Donk´schen!
Gracias!
Thanx!