

Web development: information architecture

- A set of abstract principles for the design of web sites
- A set of deliberate choices out of many design alternatives, where choice is informed by requirements
- A guide for technical decision making
- The purpose of the architecture is to provide coherence and consistency to these decisions and ensure requirements are met

Defining the problem space

- Must specify
 - Where and how content is maintained and how it is removed
 - Content models to promote browser independence
 - Use of grid, typography, colour and image in translating the site visually
 - How content, purpose and use relate and how they are performed
 - Where security boundaries are drawn and how they are enforced

Constraint management and information architecture

- Servers

- Be careful, do not try to design a wonderful world for a server that cannot support that world
- Remember: there will be network management constraints operating **here** that could affect your design: for example we may not run personal CGI scripts
- Web servers
- Web server back end capabilities – pain free CGI scripting, SSI's and security features

And even more wary...

- Copyright law
- TEXT, SOUND, STILL IMAGE, MOVING IMAGE, CHARACTER, LOGO
- Reliability
- Speed

Give warnings, offer **a**lternatives and use interlacing where possible with time consuming graphics

- Accessibility
- Write readable source code
- Use style sheets

Using graphics

- Less is more
- Wizardry can be tedious
- File formats are important
 - GIF, JPEG and PNG
- GIF limited to max of 256 *indexed* colours
 - Limited colour is useful in low bandwidth situation
 - Use in solid colour situations
 - Interlacing: image revealed before fully loaded
 - GIF subformat 87 is static but 89a can be animated
 - Supports assigning one colour to be transparent – watch out for this as background colour problems can result in some funny effects!

And still more

- JPEG

- Lots of colours
 - Good for photography and continuous tones
- lossy compression
 - Hence, highly compressed JPEG's may be streaky in transition between colours or have rogue dots peppered about
 - Experiment with compression rates; applications such as Adobe photoshop will let you play with different compression levels

- PNG

- Yes it is the W3C again!
- Weak for ancient browsers
- It is GIF plus loads of colour but no animation

Oh – it goes on and on...

- Image maps
 - Hot spots, sources and stuff
 - Use alt – to cover yourselves at the most basic level
 - Define a default if the user is off target
- Animations
 - If you must
 - Clever stuff is what goes on between frames
 - No dancing hamsters or infinite loops please
- JavaScript – rollovers
 - Careful – there are still text only browsers out there!

Things to be wary of with graphics

- File size
 - Scale the image beforehand with appropriate editing application
 - Download - time matters so think about size
 - Accommodate low tolerance threshold users by delimiting space with width and height attributes
 - Use “alt” to accommodate user working with limited bandwidth
 - Consider using thumbnails
- Dithering
 - When user agents can't do your exact colours so.... tries to come up with a close fit by poling between colours... and ends up dithering.
 - Use a web safe palette [216 colours] for large solid colour areas

Development check list

- Information architecture?
- Separation of style and structure?
- Readable source code?
- Standards/good practice compliance
- Reliability, robustness and maintainability
- Security concerns?
- Privacy concerns?
- Copyright concerns?
- Browser independence?
- Speed?

Remaining lectures

- Week 6
 - Assessment requirements, the format for reports and the criterion of assessment for ALL assessed components
- Week 7
 - Lecture this week is for
 - submission of the Progress Reports
 - Booking final presentation and report times
 - Only one member of each group need attend
- Weeks 8-10
 - No formal lectures