

# Web design and implementation

# Web design

- It's another type of publishing
  - Your web site is your shop window – people will judge your company on it
  - Web publishing is no different from other types of publishing
  - Spelling, grammar, point size, broken links, incorrect captions
  - Social networking sites make this available to all
- Get the domain name right
  - Inventive: business.com vs PlentyOfFish (dating site)
- Design is important
  - But functionality more so
  - Integrate good design with backend databases
- <http://www.webpagethatsuck.com>
  - <http://www.dokimos.org/ajff/>

# Web design mistakes

- Ego: Believing people care about you and your website
  - Why are they looking at your site?
  - What are they trying to do?
  - Do you help them achieve THEIR goals?
- Can't figure out what your website is about in less than four seconds
  - <http://www.genicap.com/Site/>
- Contrast, Contrast, Contrast. Contrast
- Mystery Meat
  - Navigation you have to roll over
  - Zero intelligible content
  - <http://id-inspire.com/>
- Too much stuff
  - <http://www.arngren.net/>
- <http://www.onlinetechnologyworld.com/worst-websites-of-2015-and-how-you-can-learn-from-their-mistakes/>

# More Common mistakes

- Huge images
- Distracting colour schemes
- Flashing gifs, scrolling text
- Music
- Unclear navigation
- Unreadable
- Cluttered
- **Useless Title**
- **Zero intelligible content**
- **Refuses to work with IE**
- **Only works with IE**
- **Requires Flash**
- **Assumes screen size**
- **Assumes font size**
- **Contains errors**

[www.webpagesthatsuck.com](http://www.webpagesthatsuck.com)

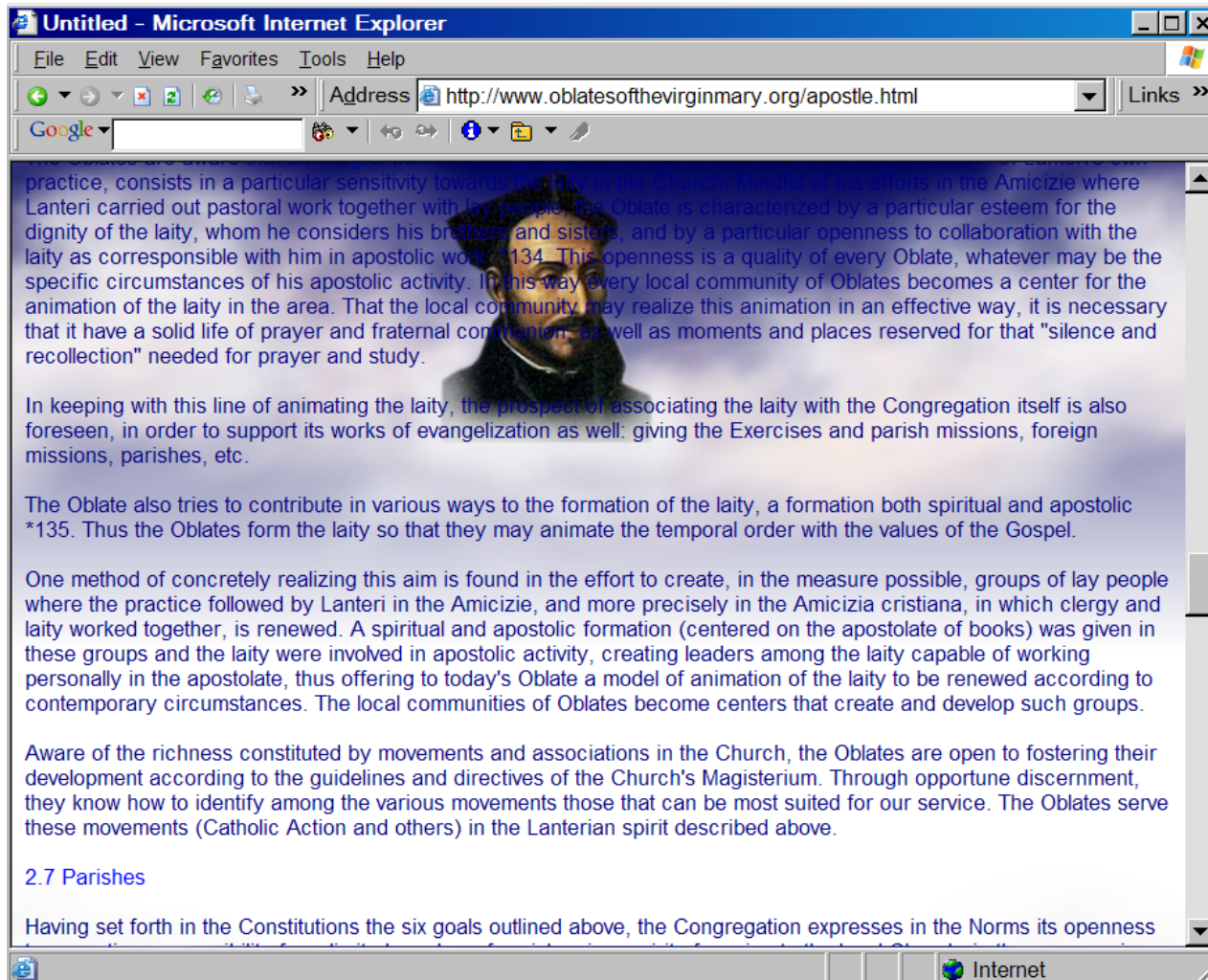
# Navigation

- Navigation is important
  - Make the navigation clear
  - Three clicks maximum to get anywhere
  - Hard when Sainsbury's have 25,000 line items
  
  - Consistent position/action
    - Logo top left and takes you home
  - Search

# TEXT

- <http://www.mrbottles.com/>
- Consistent font
  - One family
  - Care on colour/size
  - Fonts carry a subtle implicit message
    - Serif or San Serif?
    - **Loud** *Soft* STRANGE Respectable Old fashioned

# Poor design example



# Poor design example



Title seems to be confused with keywords

Far too much material

Mixture of fonts

Navigation a mess

Lingscars.com

Needs more than 1024x768



# Good design example

The image shows a screenshot of the Cisco website with several callout boxes pointing to specific design elements. The website features a blue navigation bar with the Cisco logo and links for Products & Services, Support, How to Buy, Training & Events, and Partners. A search bar is located in the top right corner. The main content area features a large banner for Flip video cameras with the text "do you flip? This season's best gift" and a "Buy Now" button. Below the banner are three columns of featured content: "Simplify Network Deployment", "Replace Your Old PBX System", and "2010 Corporate Social Responsibility Report Is Now Available". The footer contains a grid of links for Solutions For, News & Alerts, Support, Communities, About Cisco, and Offers. A footer bar at the bottom contains links for Contacts, Feedback, Help, Site Map, Terms & Conditions, Privacy Statement, Cookie Policy, and Trademarks.

**Consistent navigation**

**Call to action**

**Recent news stories**

**Quick links to sub areas**

**Flip-up menu**

**Consistent navigation**

**Services for subscribers**

**Search clearly available**

**Social media**

**Special event links**

**Technical support**

**Communities**

# Protected and encrypted pages

- Most web sites are open to all
- Protected pages for
  - Subscribers, Suppliers, Customers, Staff
  - Protected by
    - Username / pw; IP address; Domain name of browser
    - Combinations of these
- Most traffic to and from web sites is in clear
  - Potential eavesdropping possible
  - Secure Socket Layer (SSL) encrypts data
- Widely used technology
  - Used whenever privacy is important
    - Payment
    - Secure communication (spooks, terrorists, medical)

# Static and Dynamic pages

- HTML forms
  - Fill in fields
  - Press button to submit data
  - Validate locally using Javascript
  - Remember user input when redrawing form
- HTML with extra tags pre-processed
  - Java Server Pages (JSP)
  - Active Server Pages (ASP)
  - PHP
- Complete content management systems
  - Signiant, Vignette, Joomla, Drupal etc
  - Content and style kept distinct – can adapt for target
  - Dynamic pages added as extensions, many already in libraries
  - Complex javascript frameworks (Jquery, MooTools, Prototype)

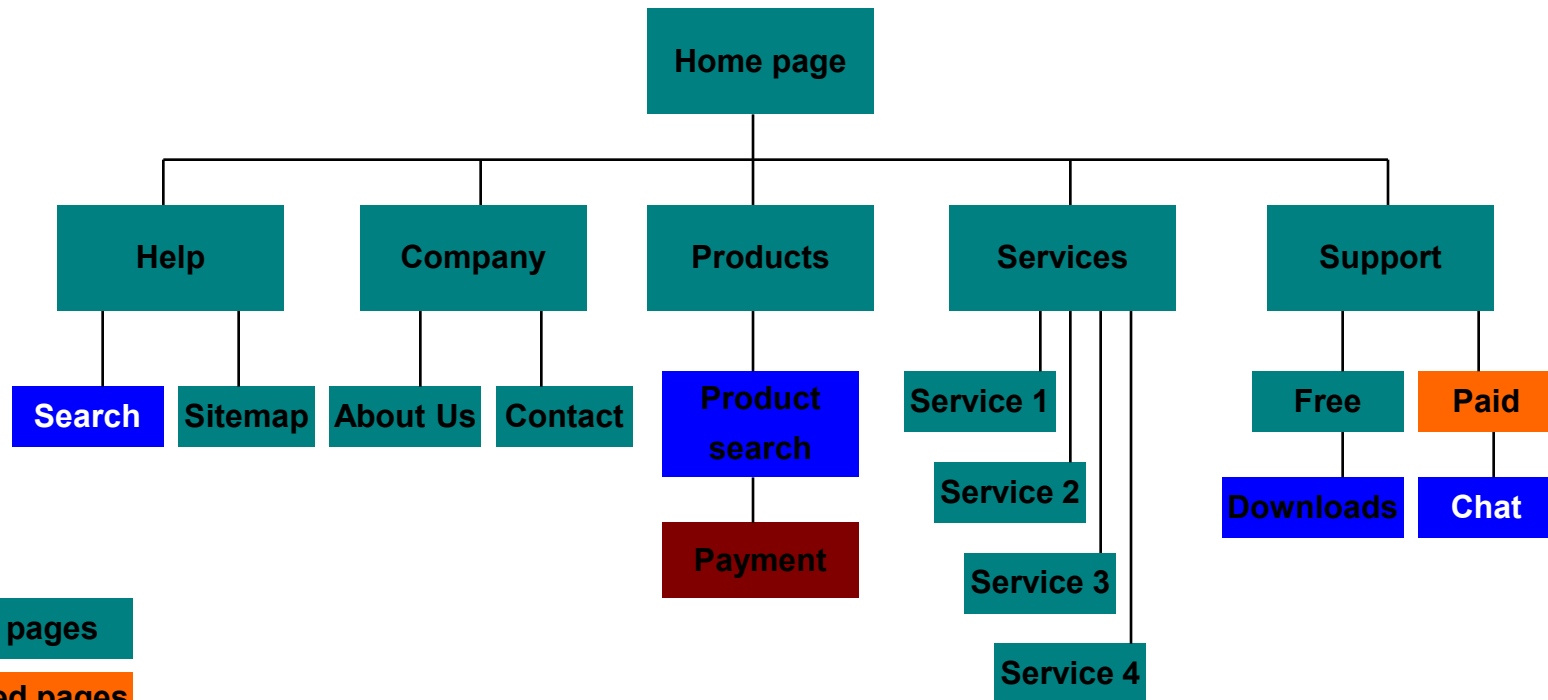
# Improving the experience

- AJAX: Asynchronous Javascript and XML
  - XMLHttpRequest calls as data entered
    - No need to refresh entire web page
    - Immediate field verification
    - Google suggestions and Instant
- Web apps that compete with local ones
  - Sproutcore for iPhone apps
  - HTML5 includes geolocation, local storage
  - Google Web Toolkit
    - Java compiler produces Javascript
      - That works with all browsers
      - That can be tested using standard Java IDE
    - <http://code.google.com/webtoolkit>

# Search Engine Optimisation

- Links from other domains
- Page titles – each page different
- Meta tags
- Anchor and alt text
- Robots.txt

# Page transition diagram



- Static pages
- Protected pages
- Dynamic pages
- Applications
- Encrypted pages

Shortcuts

Search from every page  
Payment from free support page

# Online decisions

- User logon required?
- Remember credit card details?
- Same price for everyone?
- Special offers (free delivery if over \$100 spent)
- Backend integration?
- Help desk support?
- Online credit checking?
- Order picking?
- Online stock shown?
- Delivery extra – options - reliability

# Consumer Generated Media

- General model funded by adverts
  - Layout generated by owners, content by users
  - FaceBook, MySpace, YouTube, Twitter, Blogs
  - Instant feedback to ideas and huge audience
    - Seen as important tool in UK election
    - Modern version of “on the stump” heckling
  - Companies see need to participate
    - Over 50% of shoppers who use social media follow / friend brands
    - But it can bite them back
- Consumer review sites eg tripadvisor, lateroom
  - Some ad income, other income from hotels listed
    - Offers analytics, right of reply
  - Unclear in some cases whether people had actually visted
- Wikis
  - Widely used as informal knowledge sharing tool



# Outline Physical Design

Load balancer

Big IP

Web Server  
(static data)

Apache

Application Server  
(business logic)

J2EE

Database server  
(orders)

OPS

Legacy  
(stock control)

IBM

# Sizing

- Scalability
  - How many people?
  - At the same time?
- Number of products
- Size of downloads
  - Ring tones 10K
  - Music 4M
  - Software 200M
  - Movie 2G
- Reliability

