

UX Design

Web Design - Refresher

Case Study: The W W W

Aims:

- Applying the design guidelines studied so far to the World Wide Web
- Supplement what you already learned in CSCU9A2 about Know thy User, Navigation, Layout, Colour choices, Font choices, Accessibility.

Topics covered in these notes:

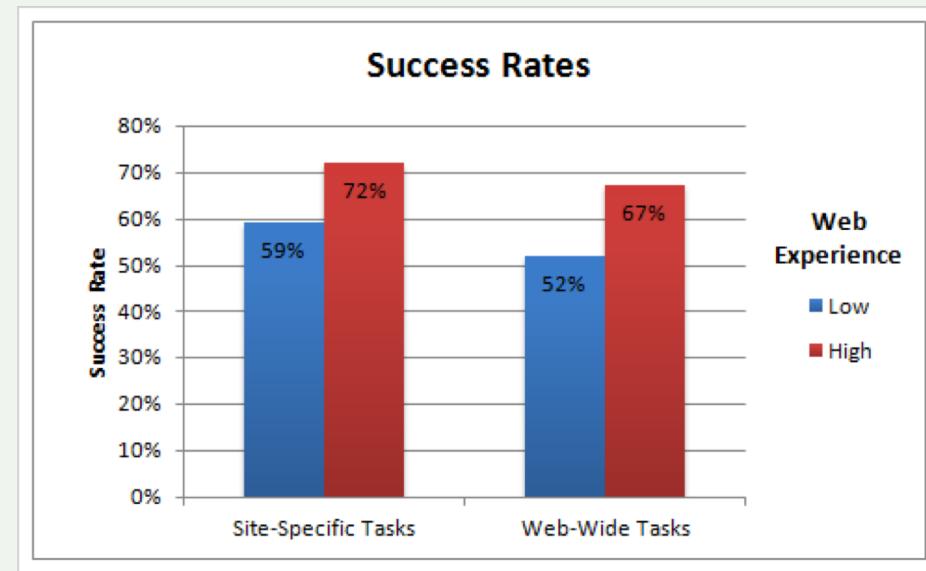
- “Know thy web user”
- What’s in a web site?
- Structure
- Navigation
- Layout
- Common Issues in Web Design

Why the W W W?

The web is everywhere, but web design is often poor

- Bloated design leading to longer download times (esp. for mobile)
- Too much hype, not enough information for customers
- Obscure or difficult-to-see site structures (where am I? where is the information I want?)

From
www.webdesigneronline.co.uk/some-interesting-usability-statistics
See also Molich and Gram (summary on
<http://www.useit.com/alertbox/980503.html>)



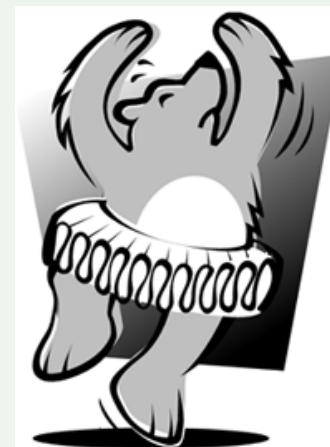
The Web Usage Paradox

Despite the bad usability of many web sites, many users use the web and get a good experience from it. Why?

- Users don't spend time at the bad sites - they become loyal users of good sites
- Many people don't know how much better the web could be
- Sometimes the Web does work
- Triumph of hope over experience?



Cooper: Homo logicus
1 click shopping



*Is Web Design *really* that bad?*

Spool's study of 15 commercial sites found that users found their desired information only 42% of the time.

- Forrester Research found various results:
 - Only 51% of the major commercial sites studied complied with simple web usability goals
 - Very few companies had any design goals for the site (although 56% did mention fast loading)
 - Only 24% of the companies conducted usability testing on their web sites
- The net result for commercial companies:
 - Loss of approx 50% of potential sales
 - Loss of approx 40% of repeat business - due to a bad experience the first time...

References

See the Resources web page, but includes:



- Don't Make Me Think! (Steve Krug)
- Shneiderman Ch 10, 11.5

- Yale Style Guide
- W3C Guidelines
- Jakob Nielsen's *Alertbox* column (useit.com)
- Vincent Flanders' *Web Sites That Suck* site
- Robert Hoekman Jr on UX (user experience)

- for web information
- www.alexa.com
- www.internetworldstats.com/stats.htm
- W3C

“Know thy Web User”

What sort of users are there?

- e.g. for the University web site?
- in general?

The web designer must ask

“What is the visitor to my site like?”

How do you think users arrive at a page?

What technology are they using?

See www.alexa.com for web information

Alexa.com

Provides metrics of various kinds for sites
- for a price

Some general stats available, illustrating
engagement
demographics
site ranking (world, uk)
arrival and departure

“Know thy Web User”: do the research

For a web designer, the question “What is the visitor to my site like?” will have many different answers depending on the pages themselves.

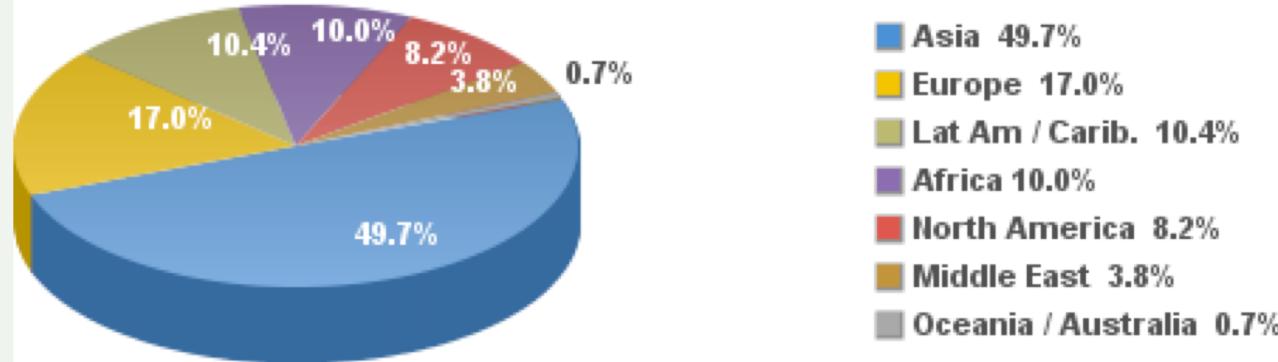
However there are general things we can say about web users - research into web usage has been carried out by several organizations.

Take such information as a rough guideline only, as:

- web usage is constantly changing at a very rapid rate
- visitors to a web page vary a lot according to how they arrived there in the first place

Use of the Web

Internet Users in the World by Regions - June 30, 2017



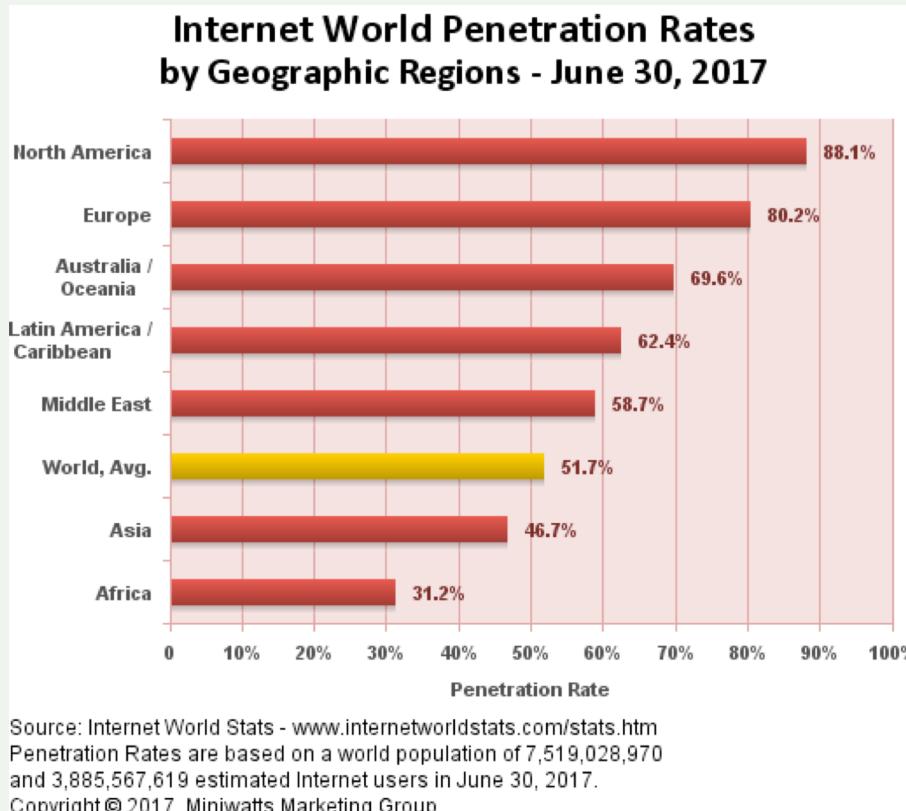
Source: Internet World Stats - www.internetworldstats.com/stats.htm

Basis: 3,885,567,619 Internet users in June 30, 2017

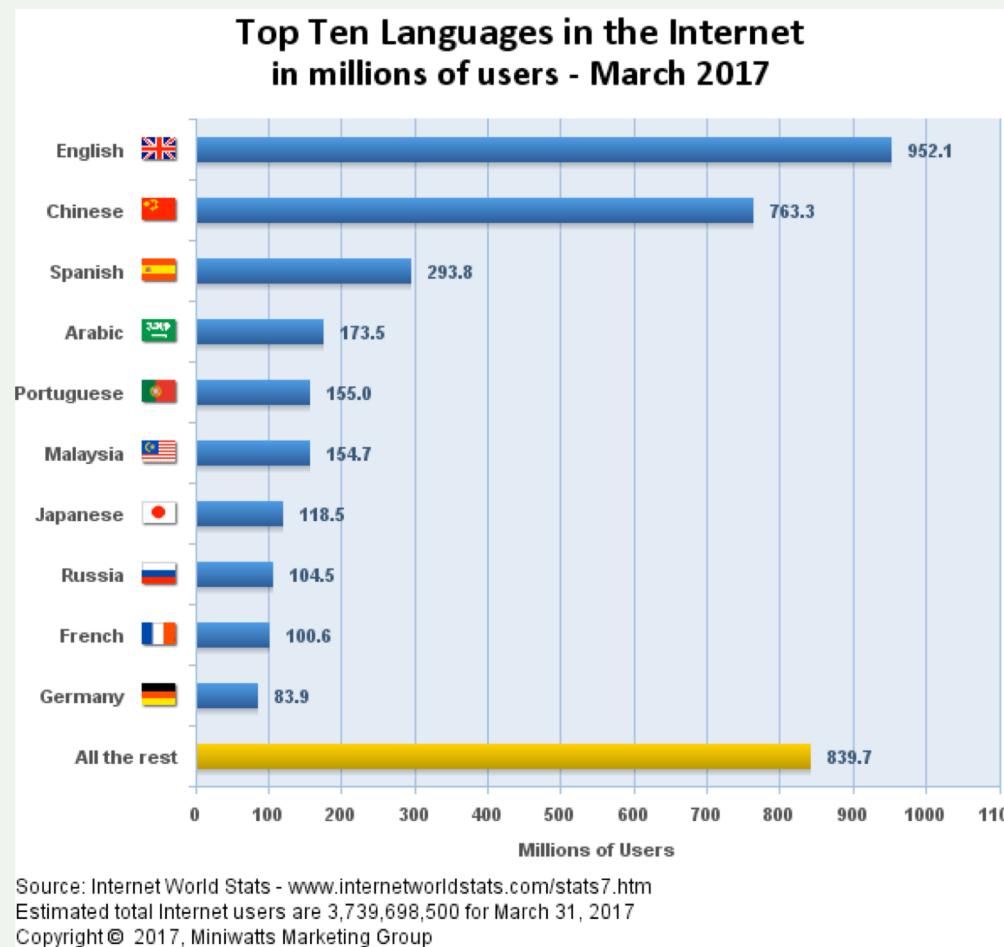
Copyright © 2017, Miniwatts Marketing Group

Source: www.internetworldstats.com/stats.htm

Use of the Web (2)

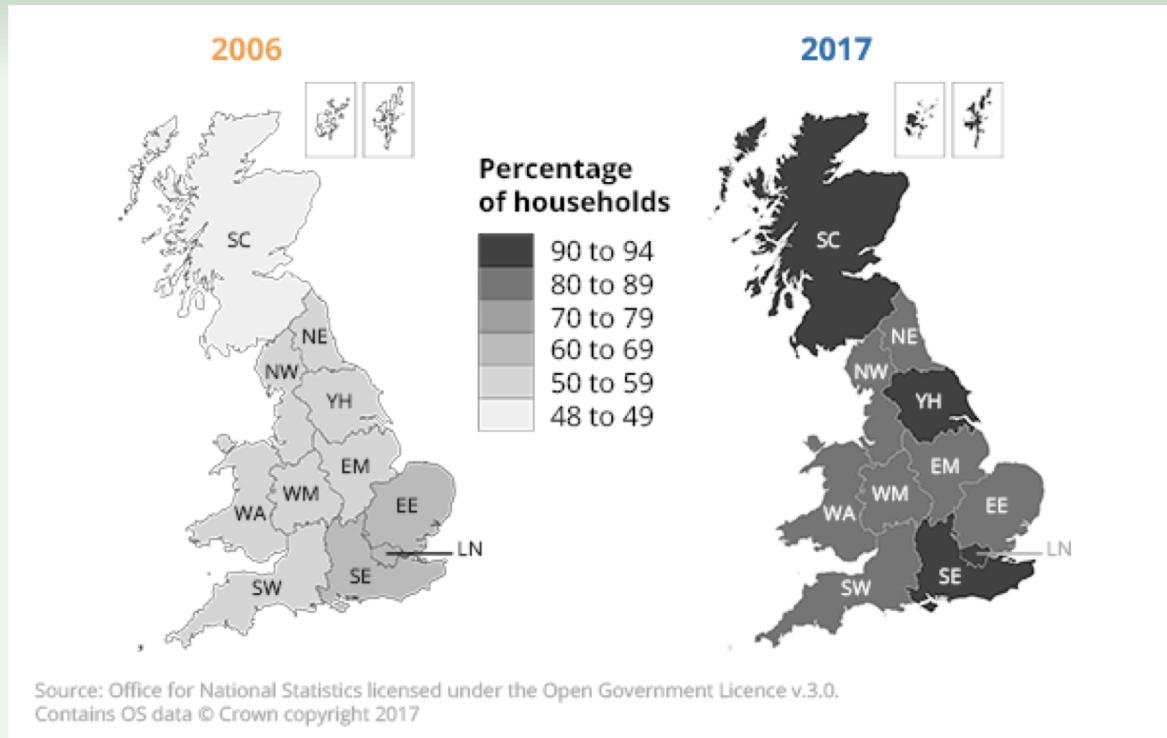


Languages on the Internet



Source : www.internetworldstats.com/stats.htm

Internet Users in the UK - 2017



In 2017, 90% of households in Great Britain had an internet connection.

This was up from 89% in 2016 and 57% in 2006.

98% households with children had an internet connection in 2017.

61% households with one adult aged 65 and over.

Daily internet use has grown from 35% to 80% in 2017.

(Sources: Office for National Statistics)

Internet Users in the UK - 2017

Age: 99% of age 16-24 have used Internet (but only 39% of age 75+).

Gender - 89.4% of all men, 86.4% of all women have used Internet

Mobile devices: access using a mobile phone in 2017 is almost 8 in 10 adults (78%) up from 24% in 2010.

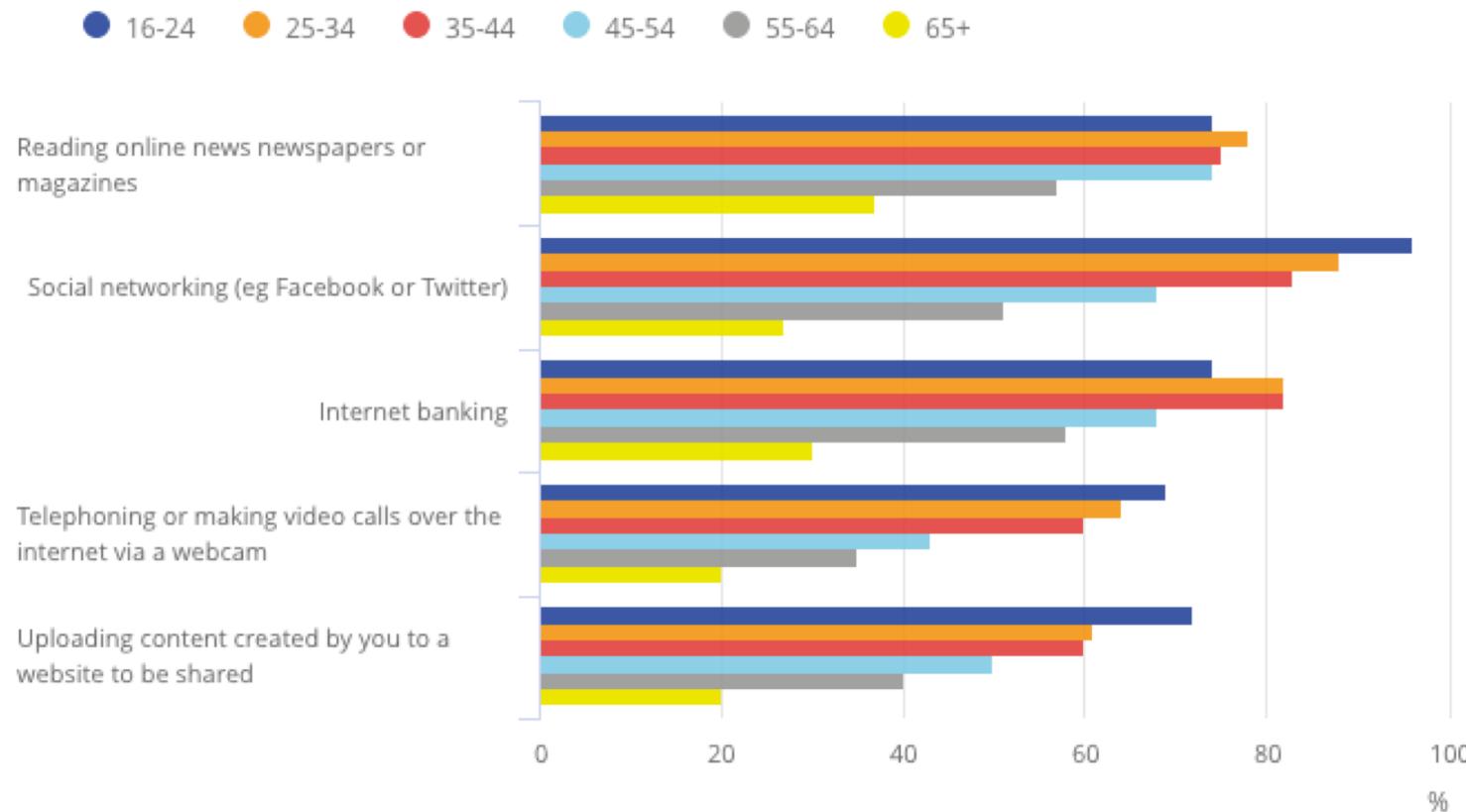
Usage highest among young: (98% of age 16-24, decreasing to just 39% of age 65+).

73% of adults use a mobile phone for "on the go" access.

(Sources: Office for National Statistics)

Internet Users (2)

Figure 4: Internet activities by age group, 2017, Great Britain

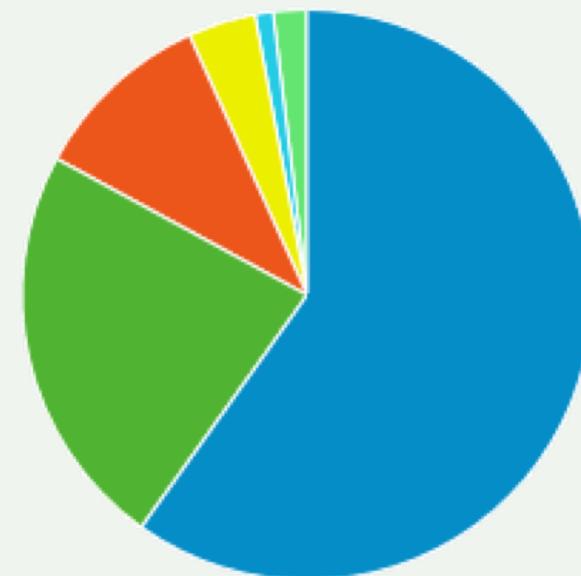
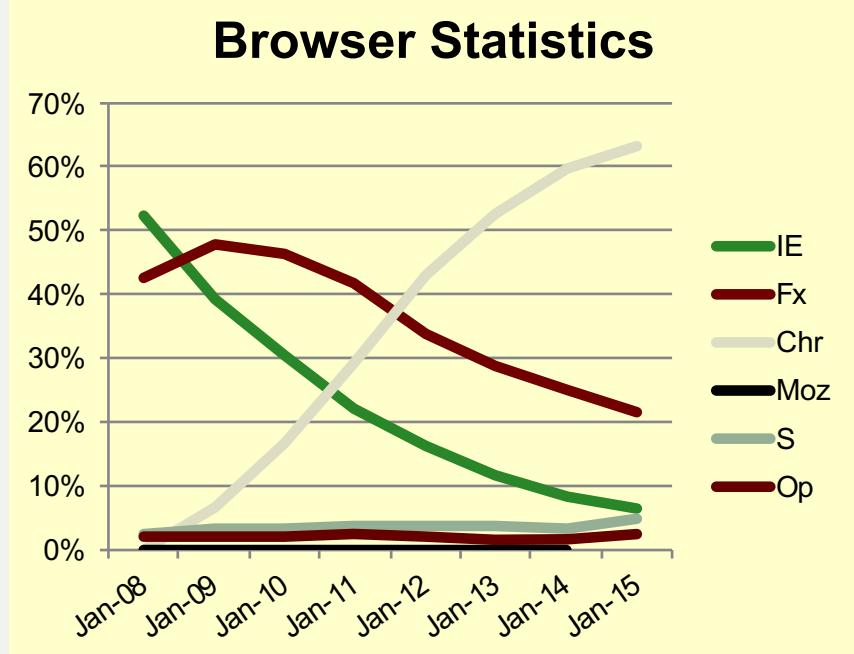


Source: Office for National Statistics

Web Browser Usage

www.w3schools.com/browsers

Chrome Firefox Internet Explorer Safari Opera Other



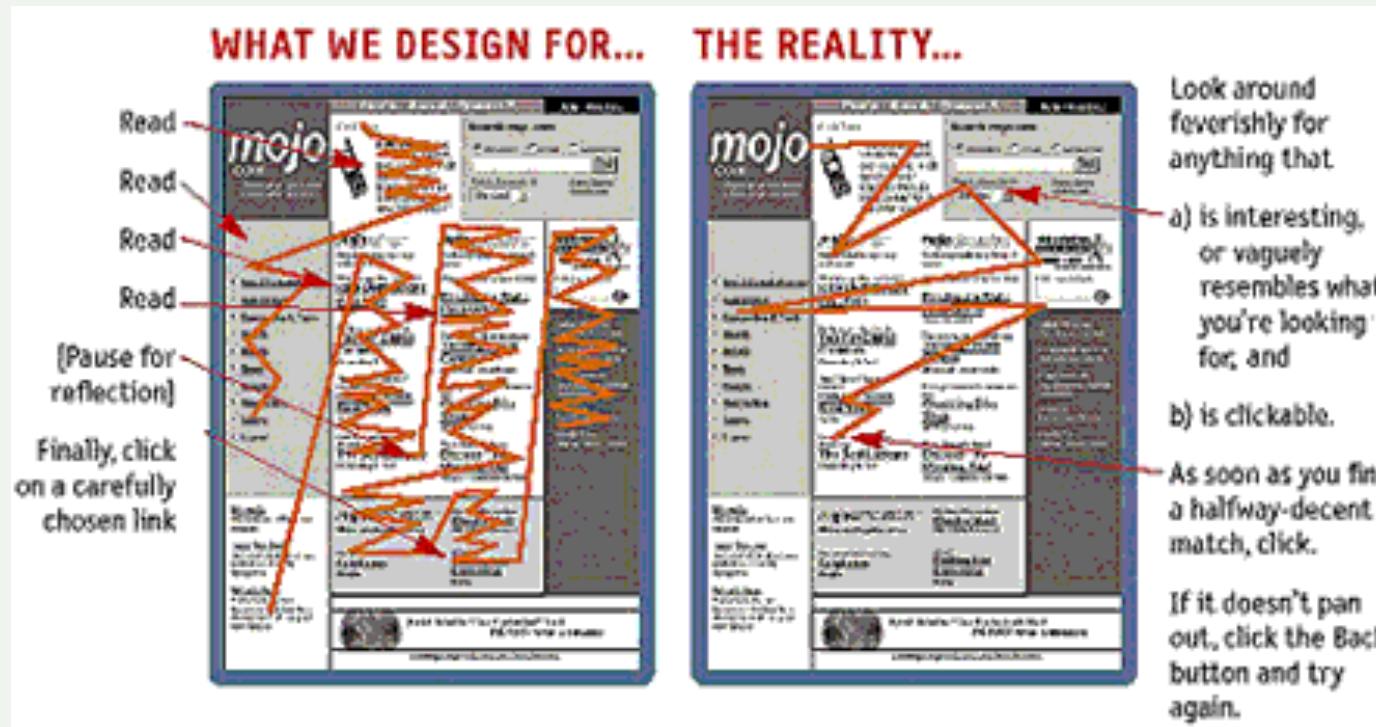
User Behaviours

Impatience

Interlaced browsing

Scanning

Text attracts attention before graphics



(image from Don't Make Me Think)

User Behaviours

Austin Bars - Google Search - Windows Internet Explorer

Media: AustinBars.jpg
Time: 00:00:00.000 - 00:00:03.000
Participant filter: All

File Edit View Favorites Tools Help

17 counts

Austin Bars - Google Search

Images Videos Maps News Shopping Gmail more ▾

Web History | Search settings | Sign in

Google

Austin Bars

About 7,690,000 results (0.26 seconds)

Advanced search

Local business results for Bars near Austin, TX

Bar & Grill
Bar & Grill
Bar & Grill
Beer Garden
Beer Lounge
Bar
Light Bar

Austin Bar Deals
Sign Up For 1 Awesome Deal A Day On Austin's Best Local Bars & Fun
www.Groupon.com/Austin
Austin, TX

Stephen F's Bar & Terrace
Sophisticated and clubby with a light Texas Touch.Congress and 7th.
www.austin.intercontinental.com

Austin Bars & Clubs
Find Austin Bars that Don't Suck
Get Thrillist Free Daily Emails
Thrillist.com
Austin, TX

Related to austin music:

Austin Symphony Orchestra
100th Anniversary Season
Top Artists and Repertoire
www.austinsymphony.org
Austin, TX

See your ad here »

Internet 100% 100%

Austin Bars
290 businesses reviewed for Bars in Austin on Yelp. Read about places like: Aviary. Dirty

(image from research on use of Google and maps www.ionadas.com)

So?

You can't really change the users: you must design around these behaviours.

Steve Krug's main rule of usability:

Don't make me think
(Don't waste my time)

Design for the big picture:

- What is this site for?
- Where does the user start?

Where am I?

Steve Krug's "Trunk Test": Identify (rapidly)

- Site ID
- Page Name
- Sections and Subsections
- Local Navigation
- "You are here" indicators
- Search box

Structure

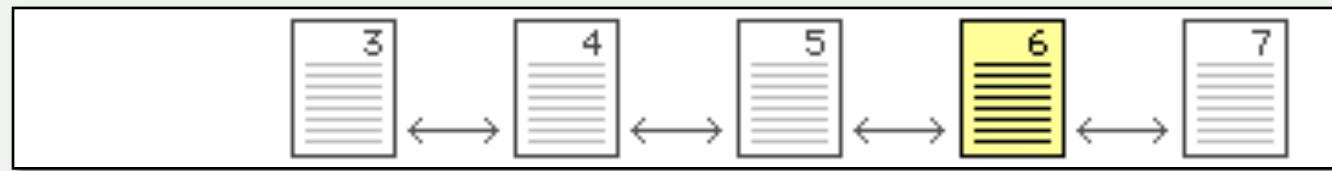
Careful structural design is crucial to a good web site.

The design should be chosen for maximum efficiency so that people can find quickly the information they want from your site.

Consider possible types of structure:

- Linear
- Tree-like hierarchy
- Network / Web

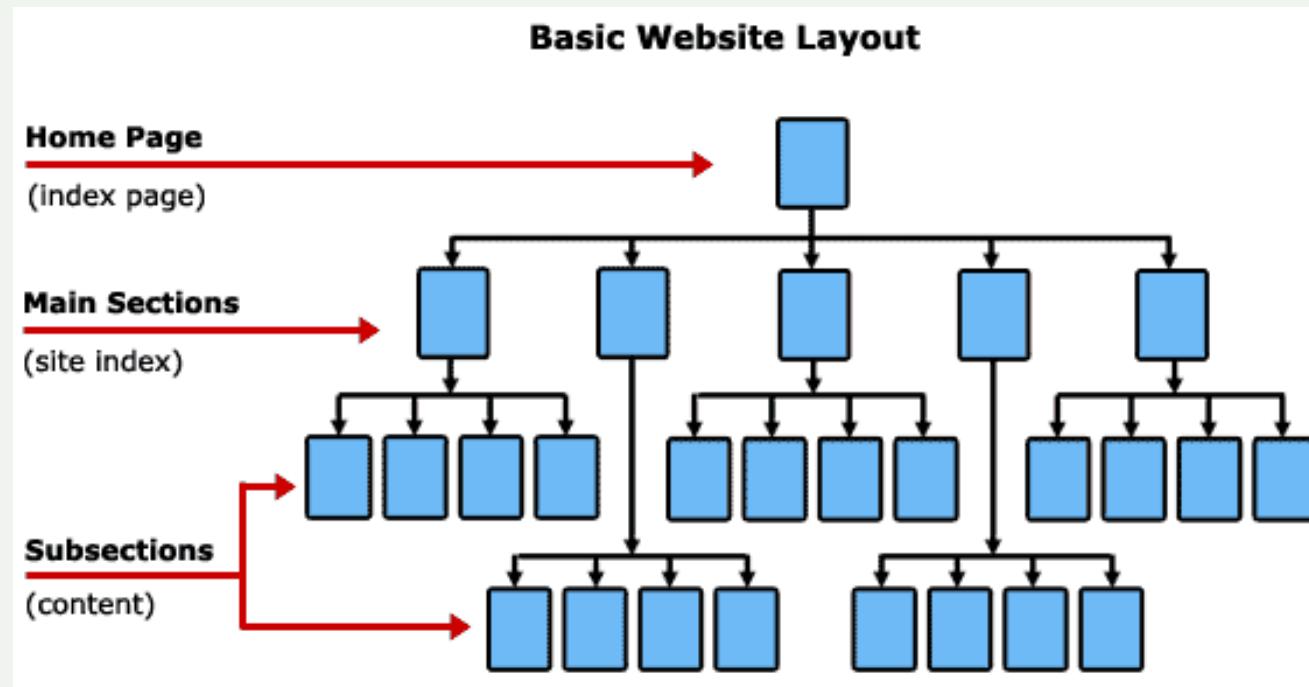
Linear Structure



Examples:

- In web-based training it is helpful for the learner to follow a pre-set course, step by step
- Cartoons with a day-by-day archive

Hierarchy



From www.rocketface.com/organize_website/

Example:

- Clothes catalogue with different types of clothing - outdoor gear, shoes, casual, lingerie etc.

Network

Many pages link to other pages in a *irregular* way. There may be links back. On some web sites it may be that every page links to every other page.

Example:

- Dept of Computing Science and Mathematics web pages.

Consider how most people arrive at a website...

- Allow them to easily navigate to the top of the web site.

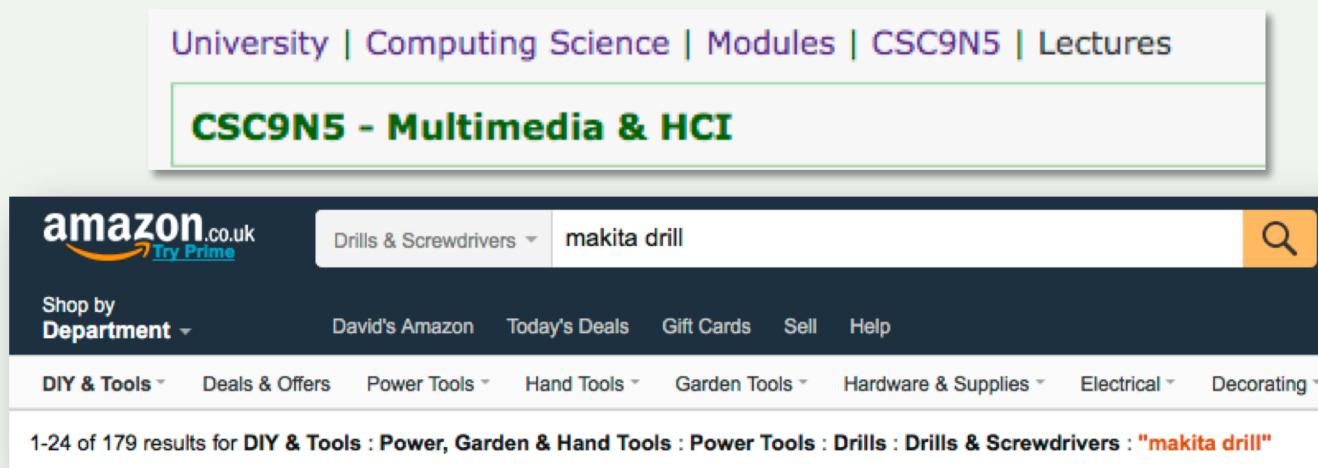
Navigation

You have the structure in mind - how do you communicate it to the user?

Guide the user to a clear mental model and don't violate it.

It is important that the user knows which page they are on in a web site, just from looking at the page itself.

- Breadcrumbs!



Navigation

Buttons with information names, simple icons (such as arrows) can be very helpful.



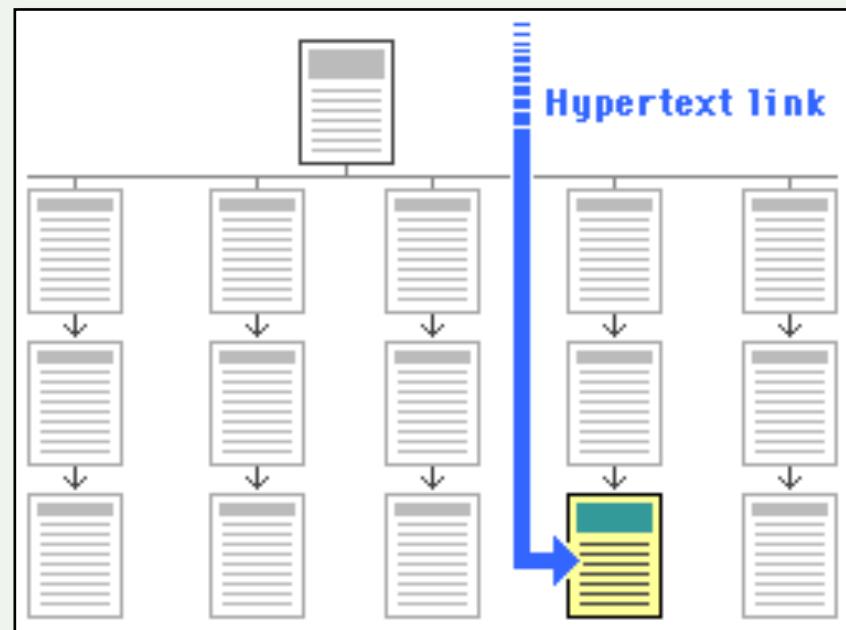
Button bar very useful - also helps to give a consistent sense of identity to the site.

Tabbed panes help locate the user.

Relevant links to the outside are also nice, particularly for an educational/reference site

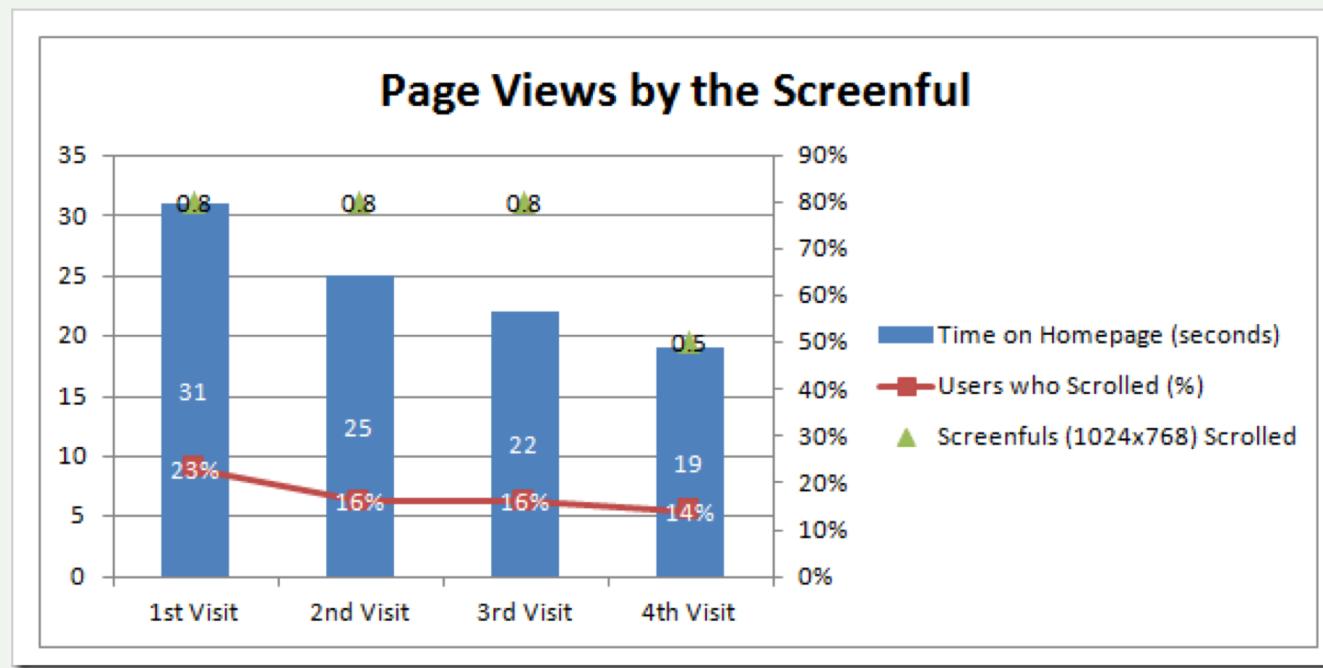
Navigation

There should be no “dead end” or *orphan* pages



Page Design: Page Size

Above the fold: Only a minority of users scroll beyond the first page.



But web design changes and users can be trained!

Page Design: Layout

A site that looks sloppily-built, with poor visual design and low editorial standards, will not inspire confidence in the users.

For maximum functionality and legibility your page design should be consistent, with the same basic layout, graphical themes, editorial conventions.



This encourages users to feel comfortable with exploring your site.

Test your layout: “Greeked” Layout

It is difficult to assess the layout of a page independently from its content, but here's one way to do it with testers:

- All contents are replaced by “greeked” (unreadable) text
- Each tester has to identify several standard elements on the page
 - e.g. page title, main content selections, site-local navigation

The tester must therefore rely on the inherent communication within the layout to interpret elements of the page

Greeked Example 1



- Lorem Ipsum
- Duisium
- Hendretti
- Nostrum
- Lanretnl

Etis Eman
[Masthron](#) | [Ossletry Sup](#) | [Sirton Yotad](#) | [Catactch newbrecht](#) | [Lorem Ipsem](#) | [Atation](#)

Sirton Yotad

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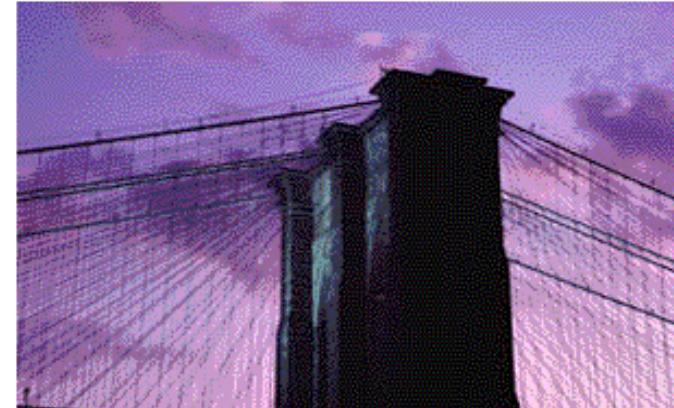
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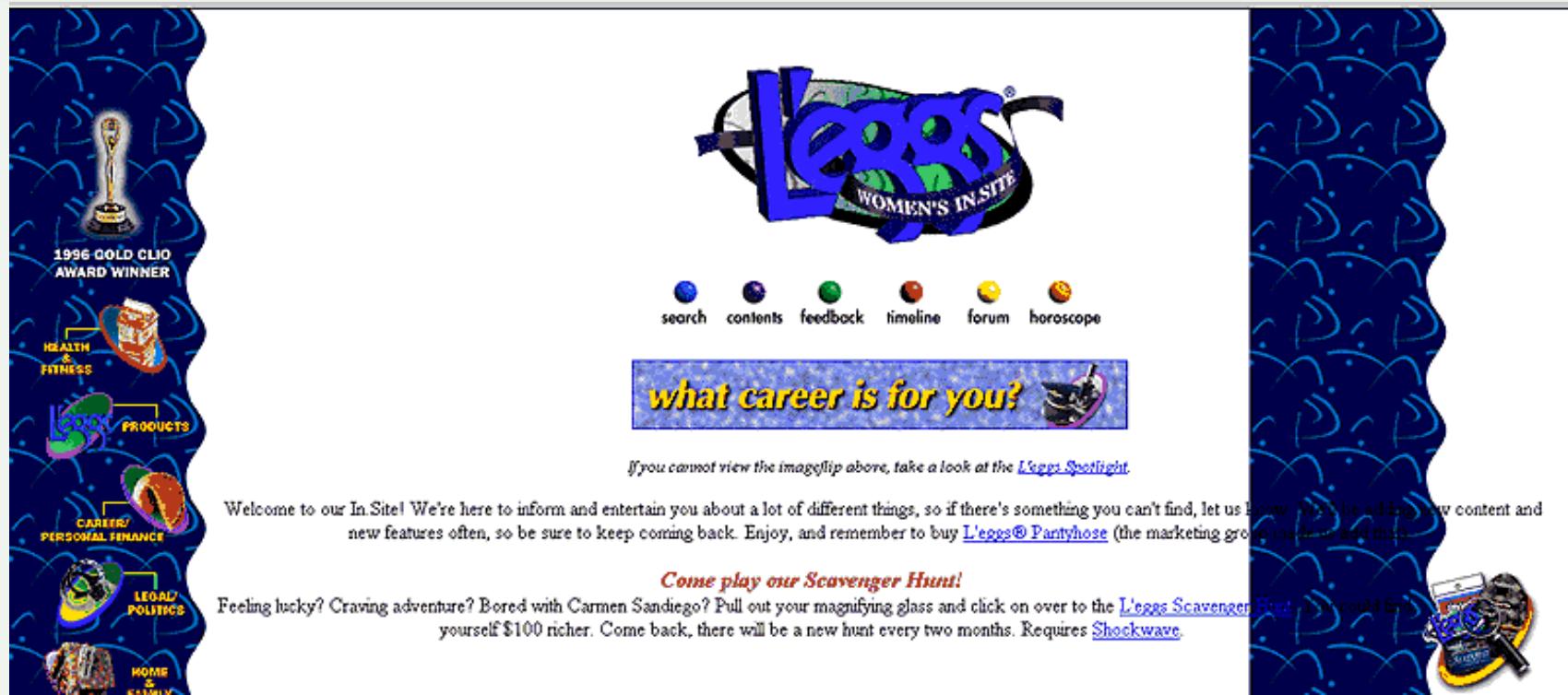
Page Design: Layout

Don't do any of these:

- Assume a particular monitor size or resolution
- Demand of (or even suggest to) a visitor that the pages should be viewed with a certain resolution/browser
- Assume a certain window size when designing pages
- Allow a background graphic to repeat when it shouldn't!

Examples of bad practice follow ...

But we will look at [webpagesthatsuck](#) in class.



To view
this site

Notes to the viewer

Recommended web browser

To view our web site, Microsoft Internet Explorer 6.0 or vision is recommended. Use of a non-recommended web browser or, even with a recommended type of browser, incorrect browser settings may cause the site to be unviewable or to be incorrectly displayed.

Recommended screen size

1024 x 768 or higher screen resolution is recommended.

Plug-in

This web site contains movies and PDF files. If the screen is not correctly displayed, obtain the required plug-in from the links below.



Adobe Reader

This is a plug-in to view PDF document files.

[Click to link to the Adobe site.](#)

Premier Web Designs - Affordable Web Page Design & Maintenance Services - Atlanta Georgia web site d - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Stop

Bookmarks Location: http://www.preweb.com/ What's Related

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Home

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Prices

Web Site Design

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PERL/CGI

SoftCart

EasyCart

Merchant Bank Interface

Search Engine Submission

Site Management

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Putting the Web to Work for Businesses

Premier Web Designs specializes in designing and building web sites for companies wishing to portray a professional image while selling their products and services on the Internet.

We offer affordable fixed-rate pricing, excellence in design, and a complete service, from registering your domain, setting up your web hosting account, web site design and development, through to maintaining your completed site.

We don't just build your web site....
Premier Web Designs has been assisting companies for more than twelve years. We can show you how to make your web site work for you.

Our team of programmers, graphic designers and business analysts provide the full range of skills needed to build a successful commercial web site.

Check out some of our [clients'](#) sites...
and see what we have done for them.



Document: Done

Page Design: Colour Choices

Choose strong light/dark contrasting colours for text against background.

- Dark text on light background is slightly more readable
- Pure white background is sometimes a bit bright for a dark room - consider very light non-white
 - E.g. cream
- Keep the background neutral (greys, pastels and earth colours work best) and plain, not too strongly coloured.
- Textures should not be too textured (stick to a smallish low-contrast repeated pattern)

Side-bar of colour down the side is sometimes decorative, if you keep text out of that area.

- It is common sense really, but - surprising how many web sites ignore the guidelines.

Opera 5 - [Ryanair.com - The Low Fares Website]

File Edit View Navigation Bookmarks E-mail Messaging News Window Help

New Print Find Hotlist Back Reload Forward Home

To: john@incredimail.com
Dear John, you've got to check this out!

Colorize Your Emails!
Click Here!

http://www.ryanair.com/

RYANAIR.COM
THE LOW FARES WEBSITE

Aarhus - Alghero - Ancona - Biarritz - Birmingham -
Bournemouth - Brescia - Bristol - Brussels -
Carcassonne - Cardiff - City of Derry - Cork -
Dinard - Dublin - Esbjerg - Frankfurt(Hahn) -
Genoa - Glasgow - Gothenburg -
Hamburg(Lubeck) - Kerry - Knock - Leeds

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Every Flight**

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discounted
hotels

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Hertz for great car rental deals!

London
Route Map
How do I get this fare?
One way
Bologna(Forli) £1
Ancona £1
Gothenburg £1
Glasgow £1
Frankfurt(Hahn) £2
Brussels £2

Brussels (Charleroi)
Route Map
How do I get this fare?
One way
Stansted* 310
Glasgow 510
Shannon 510
Dublin 510
Carcassonne 710

Dublin
Route Map
How do I get this fare?
One way
Edinburgh# £7
Glasgow# £7
Cardiff £6
Bristol# £7
Liverpool £7
Bournemouth £7

Ryanair.com - The L...

Cheap Flights to Europe with Ryanair – Cheap Flights from UK

<http://www.ryanair.com/en>

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ONE WAY FROM £5 TAXES & CHARGES INCLUDED TRAVEL IN OCTOBER

Flights Online Check-In Hotels Hertz

Return One Way My travel dates are flexible
 Depart Date 1! Sep 201(Number of Passengers
 Departing from 1 Adults
 Going to 0 Children (under 16 years)
 Return Date 0 Infants (under 2 years)

I have read and accept the [Terms of Use of the Ryanair website](#)

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- Sing the praises of cheap flights – FASCINATING AIDA style!

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Find: wash Next Previous Highlight all Match case Reached end of page, continued from top

Cheap Flights – Book cheap flights to Europe with Ryanair

RYANAIR

Flight Info Contact Us Fees Conditions Feedback UK (English) Search FAQ

FLIGHTS CAR RENTAL RYANAIR HOTELS CREDIT/PREPARED CARDS BUDGET HOSTELS PARKING & TRANSFER TRAVEL PLANNER ROUTE MAP MANAGE MY BOOKING DAILY DEALS GIFT VOUCHERS

DOWNLOAD RYANAIR'S APP NOW!

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BOOK TILL THURS, TRAVEL OCT - 18 DEC. FARES ONE WAY FROM, T&C'S APPLY FARE INCLUDES A £6 ADMIN FEE WHICH CAN BE AVOIDED IF YOU PAY WITH RYANAIR'S CASH PASSPORT CARD. [CLICK HERE](#)

Flights Hotel Car

Return One-Way Flexible dates

From Date

To Date

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Adults Child <16 Infant <2 Book Now

Online Check-in

Car Hire Up to 33% Off Hertz SALE

Hotels up to 80% off! RYANAIRHOTELS.COM Fly Cheaper • Sleep Cheaper

Aircoach Holiday Rentals Hostels B&Bs Airport Parking Daily Deals London Trains Malta Airport Transfer MAD & BCN Transfer Win Prizes

News 24 Sep - 2 Oct - Rome Ciampino - 9 Day Runway Closure 12-14 Nov - Dusseldorf Weeze - Runway Closure

Cheap Flights	Destinations	Ryanair Hotels	Special Offers
Cheap Flights Other destinations »			
Liverpool <input type="button"/>	£ <input type="button"/>	Bristol <input type="button"/>	£ <input type="button"/>
Derry <input type="button"/>	18	Barcelona Reus <input type="button"/>	18
Kaunas <input type="button"/>	18	Dublin <input type="button"/>	22
<small>NEW</small> Oslo Rygge <input type="button"/>	18	Knock Ireland West <input type="button"/>	22
Oslo Torp <input type="button"/>	18	Gdańsk <input type="button"/>	27

It's time for banking shaped around you 
Get started here

Terms, conditions and exclusions apply.
The Features Store cannot be used for certain accounts.

BARCLAYS

x Find: print Next Previous Highlight all Match case

The image shows the homepage of the Ryanair website. At the top, there's a navigation bar with links for 'Plan', 'My bookings', 'Check-in', 'Sign up', 'Log in', 'Info', and a language selector set to 'UK'. The main banner features a couple looking at a map, with the text 'BOOK YOUR AUTUMN GETAWAY FROM £16.99' and an illustration of an airplane. Below the banner is a search interface with tabs for 'Flights', 'Hotels', and 'Car hire'. The 'Flights' tab is selected, showing options for 'Return' or 'One way' travel. The 'From' field is set to 'Manchester' and the 'To' field is 'Destination Airport'. A large blue 'Continue' button is prominent. A note at the bottom left mentions '14 - 29 Oct: Airport Closure - Rome Ciampino' with a 'More Info...' link. Below the search area are three promotional boxes: one for car hire (with logos forertz, Firefly, AVIS, SIXT, and Thrifty), one for Leisure Plus (showing people on a beach), and one for Booking.com (showing a hotel room). Each promotional box includes a 'TO 50% OFF' offer.

RYANAIR

Plan | My bookings | Check-in | Sign up | Log in | Info | UK

BOOK YOUR
AUTUMN GETAWAY
FROM £16.99

Flights Hotels Car hire

Return One way

From: Manchester To: Destination Airport Continue

14 - 29 Oct: Airport Closure - Rome Ciampino More Info... >

TO 50% OFF

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TO 50% OFF

Booking.com

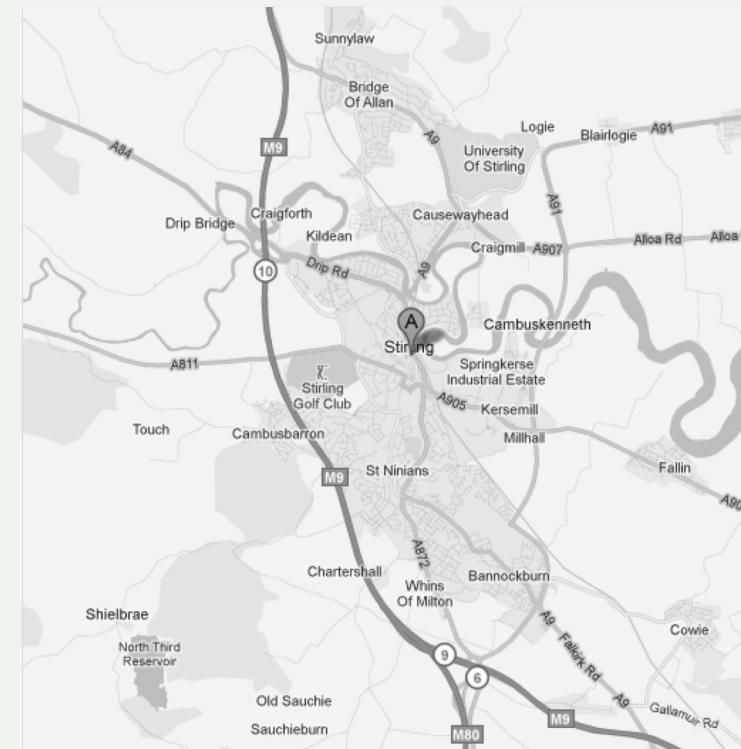
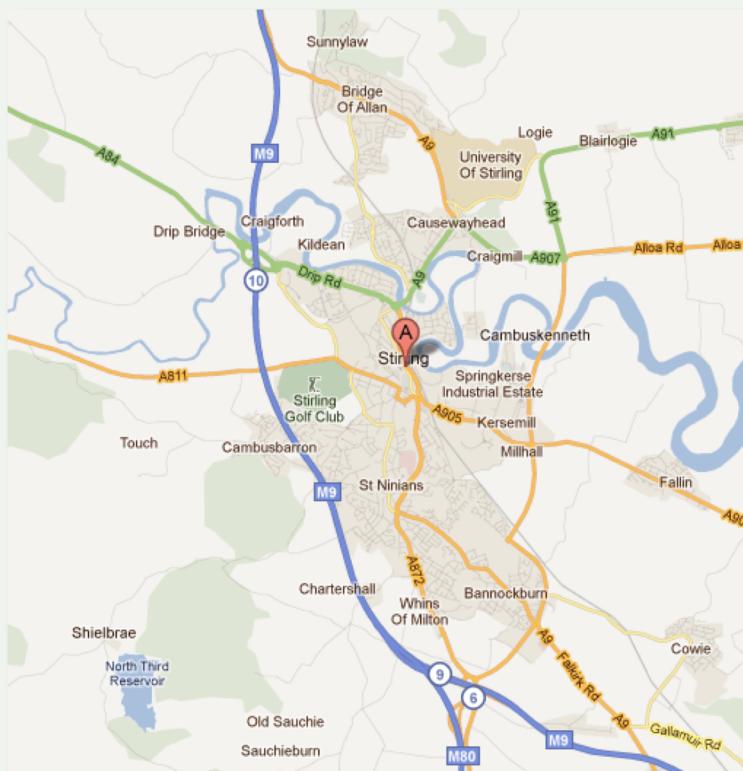
Exclusive car hire rates for Ryanair customers

Check out Leisure Plus

Huge savings on hotel rooms across Europe with our hotel partner, Booking.com

Colour testing: use greyscale

Is your colour significant? Print out the design in greyscale - do you have the same information content?



Usability or Accessibility

Usability: ease of use and learnability of a human-made object.
Associated with effectiveness, efficiency, satisfaction.

Accessibility: is a general term used to describe the degree to which a product, device, service, or environment is available to as many people as possible. Often focuses on people with disabilities or special needs.

Design for the minority as well as for the majority

Page Design: Special Needs

Partially sighted users

- Not necessary to use huge fonts, but don't insist on using small fonts
- Partially-sighted users may wish to set their own preferences in their browsers
- Set the font size to be relative (i.e. % change)

Colour blindness

- Don't rely on users being able to distinguish between awkward colour contrasts (red/green/yellow/orange/brown are the awkward combinations) of similar brightness
- Use lighter/darker contrasts instead

Page Design: Special Needs

Dyslexia

- Some dyslexic users find black text on pristine white more difficult to read.
- A pale-coloured background may be better.

Blindness

- It's not just blind/partially-sighted users who have difficulty with images - some people have slow links and turn off image downloading.
- Don't unnecessarily prevent them from getting content out of your site.
- Use ALT tags to give a plaintext version of a graphic heading.

Deafness

- Don't unnecessarily rely on a sound file to get a message over.

Content

Easy to forget content:

- Don't forget the Who, What, When and Where!

Who is speaking? (very obvious, but easy to forget!)

- Put your name on the site. Create some rapport!
- Provide users with a means to contact the author

What is the web site about?

- Make sure your page has a title (HTML <title>).
- This will show up as the label when people bookmark the page.

Content

When? How new or old is this information?

- Put in when you last updated the site.
- Maybe highlight new material!

Where am I? 

- Where within the structure of the web site?
- Maybe also indicate where the web site is physically located.

Non-textual Elements



sound

player

music



MP3

television

plug-in



animation



applets

video

COOL GRAPHICS

Non-textual Elements

Ask: "why do I need it?"

- Multimedia elements are not just used to "jazz up" Web pages - they are (graphics in particular) an integral part of the user's experience with a site.
- Powerful impact - use in small doses!

Don't annoy users by:

- forcing them to get plug-ins
- giving them long download times
- distracting them by using animation

Be considerate by:

- not forcing large graphics/movies on them
- giving a choice, and informing about download sizes

Graphics

Overuse of graphic emphasis leads to a messy page where everything is garish and nothing is really emphasized.

- Preferably, don't use tiled background images
 - Using them for a "side bar" effect is often ok
 - If you must, use a subtle image
- Choose the right file format (more details later in course) to minimize file size without compromising quality
 - In summary, PNGs for diagrams, JPGs for photos
- Use height and width tags to improve browser performance (help the browser to lay out the page)

```

```

10 Useful Usability Findings

1. Form Labels Work Best Above The Field
2. Users Focus On Faces
3. Quality Of Design Is An Indicator Of Credibility
4. Most Users Do Not Scroll
5. Blue Is The Best Color For Links
6. The Ideal Search Box Is 27-Characters Wide
7. White Space Improves Comprehension
8. Effective User Testing Doesn't Have To Be Extensive
9. Informative Product Pages Help You Stand Out
10. Most Users Are Blind To Advertising

<http://www.smashingmagazine.com/2009/09/24/10-useful-usability-findings-and-guidelines/>

Testing

Don't forget to test your pages on potential users!

- Listen to what they say...

More about usability testing in a later lecture...

End of Lecture