UX Design

(Part 2)

Interfaces

Balancing function with fashion

Ways of helping the user

- Metaphors
- Data Display
  - Structure
  - Affordances
  - Visuals

Faulkner, Section 4.2

Function vs Fashion

Historically, software had purely function.
Increasingly, presentation and UX are important issues.

Two very old examples (of function over presentation):

- Henry Ford's saying that customers could have their car any colour they wanted, so long as it was black!
- Typewriter design – QWERTY

(why have these examples? To illustrate that user design is not just a computing problem or a recent problem)

Shneiderman, Chapter 11

Function vs Fashion

An example of the old/recent contrast:

Early text editors used a command line. Commands were typed in, and commands such as `s/color/colour/` were common (replaces an occurrence of the first word by the second).

- You can still try it on a unix command line: ed.

Now WYSIWYG (What You See Is What You Get) text editors are the standard.

Increasingly we're using voice command, so even WYSIWYG may become obsolete.

Function vs Fashion

A third example: the W W W

Modern web pages tend to rely heavily on sophisticated graphics. Fine, but **not** if it is at the expense of functionality!

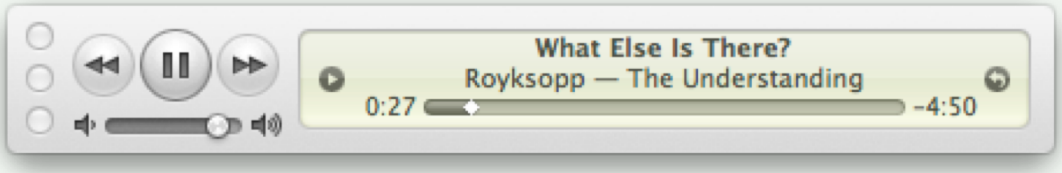
Web users will be frustrated if the presentation style prevents them from finding information quickly, because:

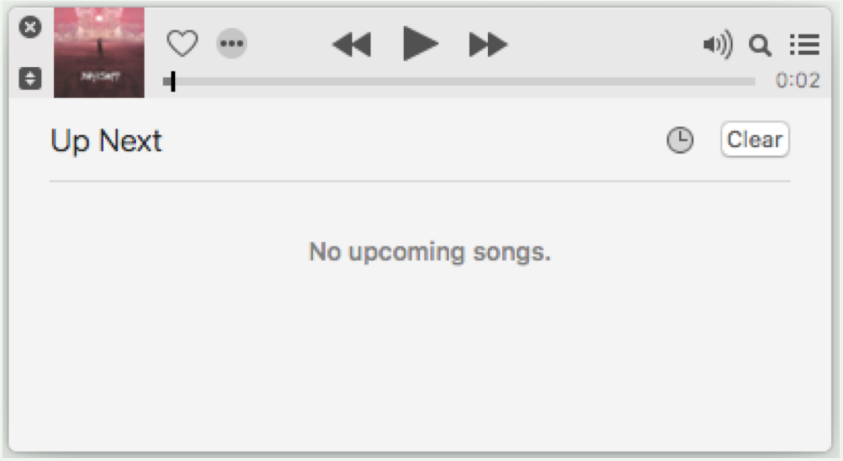
- Flashy graphics take too long to download
  - They often distract the user from what they are trying to do
  - They are not directly searchable
- Too much attention has been paid to the images and not enough to helping the user find the information they seek.

What is a Metaphor?

A metaphor is something that is based on a concept with which the user is already familiar

Examples are the easiest way to explain





Uses of Metaphors

The main point about the use of metaphors is that the user already knows how the familiar object works.

This is both an advantage and a disadvantage:

- Shorter learning time when the metaphor fits
- but confusing when the metaphor doesn't fit - this is the danger for the designer if a metaphor is taken too far, e.g.
  - the Macintosh trash can
  - a video recorder metaphor for a printer

Metaphors may be hard to find - there is not always a real world equivalent to an operation, e.g.

- changing screen resolution
- scroll bars

Data Display

Organization
Affordance
Visual effects

Shneiderman, Section 2.7

Organization

Smith and Mosier's objectives for data display:

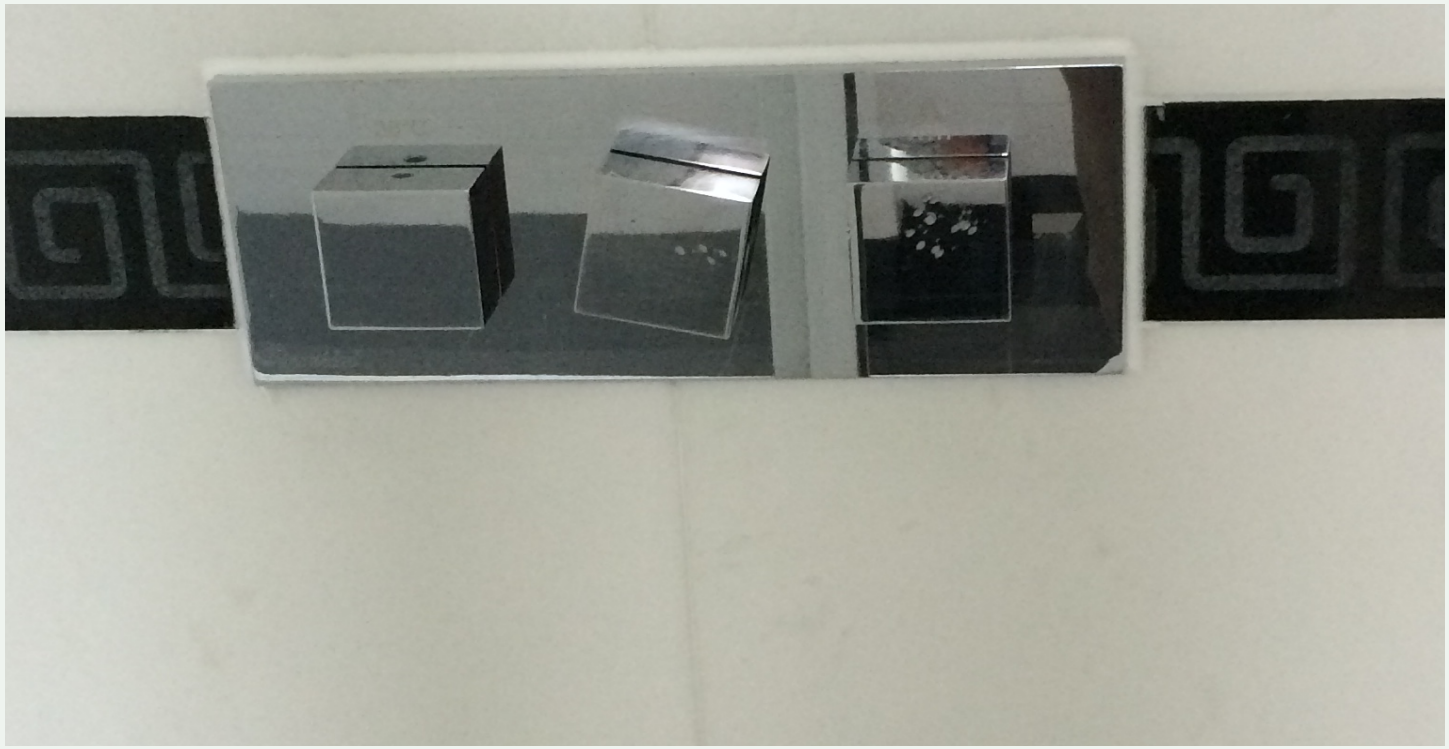
- Consistency of data display - terminology, fonts, colours, capitalization
- Efficient information assimilation (e.g. neat columns, proper use of spacing)
- Minimal memory load on user (requires careful organization of multi-action tasks)
- Compatibility of data display with data entry
- Flexibility for user control of the data display – e.g. different views of working area

The Cooker


carefree
top oven
main oven
grill
hotplates
oven & hob light
FRONT LEFT
REAR LEFT
REAR RIGHT
FRONT RIGHT
GRILL
TOP OVEN
MAIN OVEN
GINGER

The taps

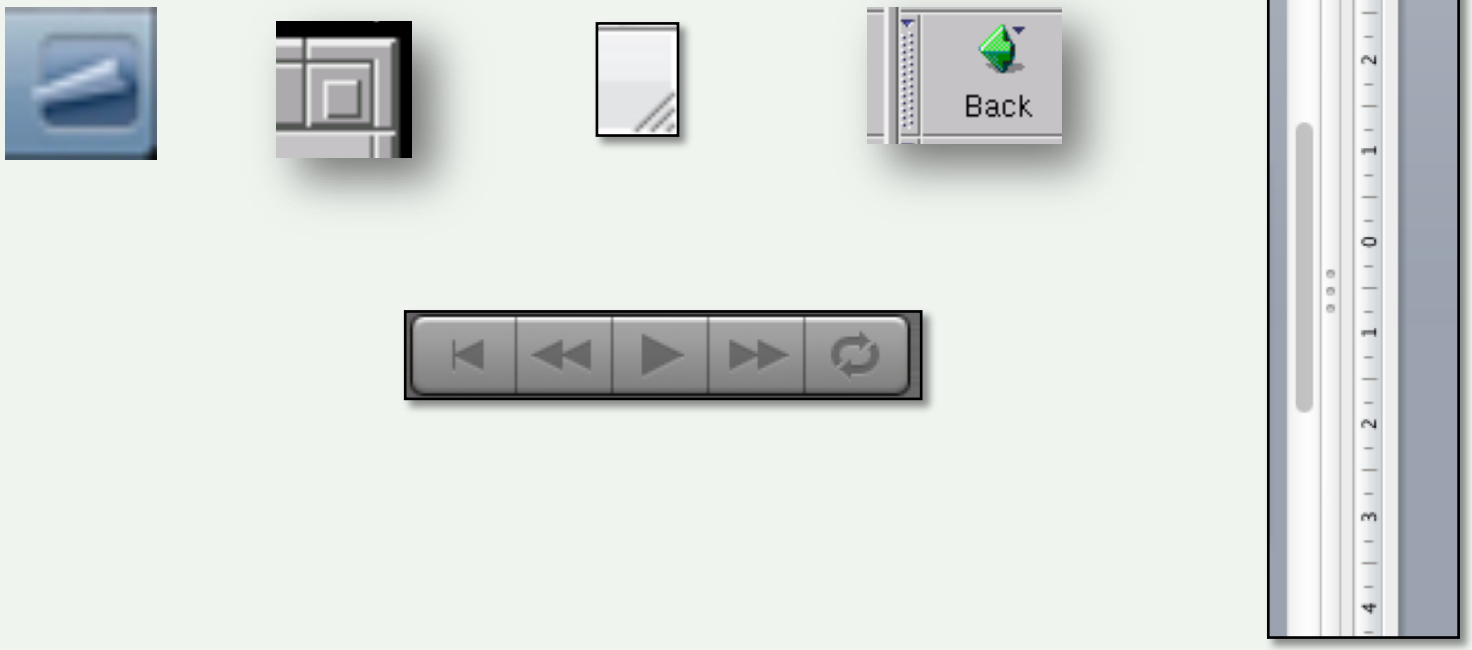
More taps



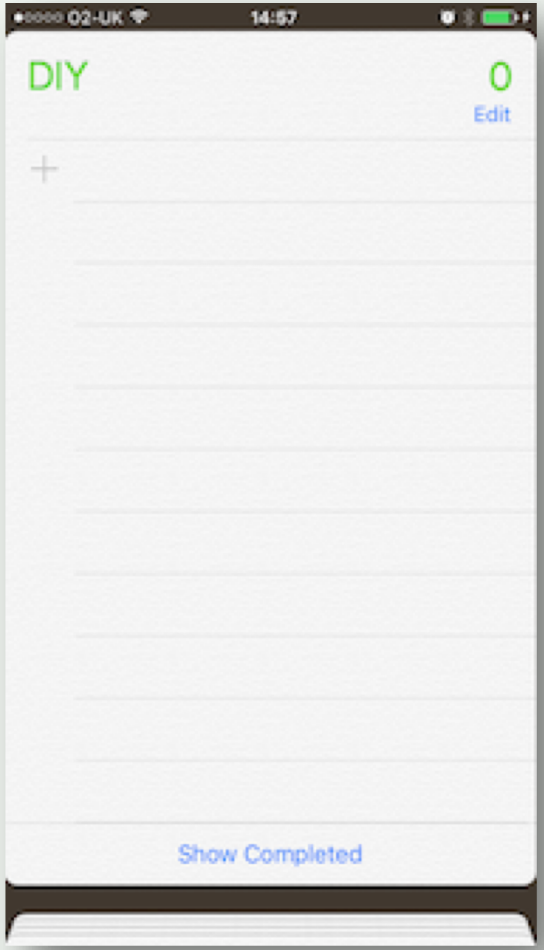
Using Affordances in Interfaces

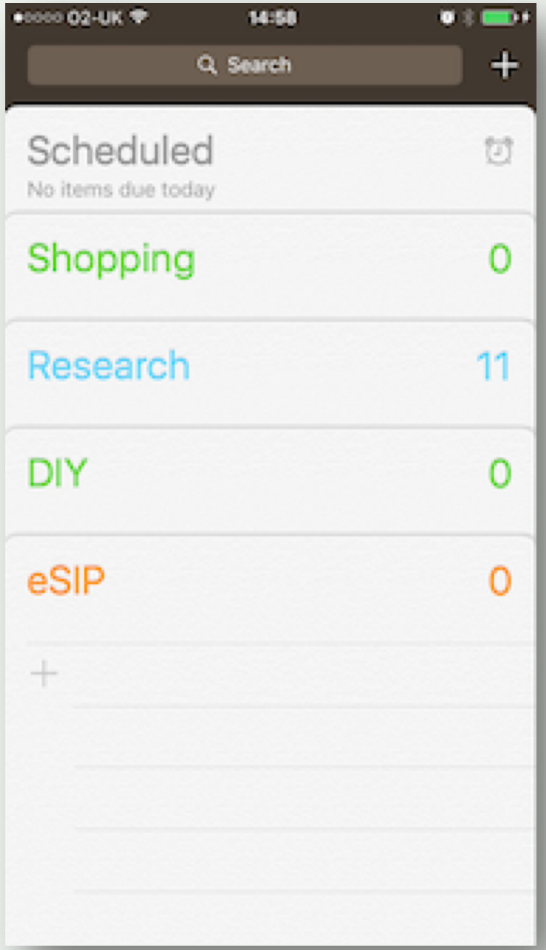
Give visual cues to the user what to do with the interface

Buttons press, scrollbars move the view, arrows indicate that something happens in that direction, textured surfaces indicate it's touchable…



Affordances





Affordances???

➔?

Visuals – Eye-catching

Choose appropriate visual display of information, on the sliding scale from subtle and unobtrusive ……to

(Many of these are obvious, when you think about them!)

Visuals - Intensity

Intensity:

- Don't vary the intensity a lot, too much is distracting.
- Keep to two levels only, with a limited use of high intensity to draw attention.

Example: Use of **bold font** for emphasis

Visuals - Marking

Various forms of marking may be done to help draw the user's attention to things, or just as helpful guidelines.

Forms of marking:

- Underlining (like a hyperlink on a web page)
- Enclosure in a box (text area for writing in)
- Pointing with an arrow (to indicate a menu item that is itself a menu)
- Bullets or other symbols (useful for lists of things)
- Use of colour (more later)

Visuals - Fonts

Don't use too many fonts. Up to three is usually sufficient.

If **you** use too many, it is both confusing (because **you** are violating the consistency **guidelines**), and also the *text* can get hard to read if the user keeps having **to switch** between different fonts.

Dix 2.5.2 has a section about readability of text.

Visuals - Fonts

Different sizes of fonts can be used very effectively, if chosen with care.

Example:

- Larger font sizes for headings, medium font sizes for sub-headings, smaller font sizes for the main text (used in word-processed documents, slides, web pages, as well as interfaces for programs)
- Remember that legibility is a requirement

Don't use too many sizes for inappropriate uses though, otherwise it could be distracting or just plain silly.

Up to about 4 different font sizes should be plenty!

Visuals – Inverse Video

Inverse video can be used as an effective highlighting technique in some situations.

(like this)

Examples:

- Highlighting text in word processors
- Firefox attempts to second-guess the user when typing in a URL

Visuals - Blinking

Blinking is very **very** distracting, very attention getting (as is any movement).

- Use with very great care and in limited areas.
  - Or don't use at all!

Good example:

- Insertion of some blinking text on a half-completed lecture slide to remind me not to leave it like that!

Bad example:

- Use on a web page. Try to avoid this - if you want to look at the blinking thing, you can't, because it's blinking. If you don't want to look at it, the blink distracts and annoys you.

Visuals - Colour

Colour does attract attention, so should be used carefully and the brighter colours used sparingly.

Don't forget that some people are colour-blind! (see later)

Suggestion:

- use mostly neutral colours, with up to four colours to complement these. Reserve the rest of the palette for occasional use.

Example:

- Microsoft Word uses mostly grey shades from white to black, with a moderate use of blue, and other colours used very sparingly on buttons.

Audio

Hearing is the second most important of the senses to humans, so sound can play a useful role in an interface.

But don't annoy the user with over-use of noises!

Use soft gentle tones for occasional positive feedback and harsher sounds for rare emergency situations.

Examples:

- The Apple Mac's "soft squelchy sound" when you press a button to launch an application
- A loud beep if you are about to close an application and possibly lose some work as a result.

Visual Layout

There is a danger of creating over-cluttered displays with these sort of techniques.

Novices need

- Simplicity
- Clarity
- Logically organized displays
- Well-labelled components

Expert users don't need extensive labelling, and displays that are too simple or that hide the powerful features too well, may irritate.

Dix Section 3.7

End of Lecture