Dave Wood

INTERFACE DESIGN

AN INTRODUCTION TO VISUAL COMMUNICATION IN UI DESIGN

2

Finding the flow:
Designing interaction

We have seen how the design of a
successful interface is a complex iterative
process, and that visual communication
is an important part of it. To illustrate
how the designer's role contributes to
interface design, the subjects of information
architecture, navigation, wireframes and
paper prototyping will be discussed in this
chapter. These all take place during the early
ideation and scoping phases of designing
interfaces, before any branding has begun.

This chapter will take you beneath
the surface of the graphical user interface
(GUI) to reveal how to design the flow
of interactivity.

Humans were not programmed for computer use. Therefore computers (in all their many guises) have to be programmed to deal with humans, and it is the UI that enables interaction between the two. It is the UI that makes the interaction more intuitive, through direct input and immediate feedback. In screen-based media, the UI is referred to as a graphical user interface (GUI). GUIs create visual affordances ('clues' to the purpose of particular elements within a design) through the graphic design, which communicate the navigation, the interaction and the content in an interface through the use of visual metaphor. Traditionally, GUIs have been designed with WIMPs – windows, icons, menus and a pointer. Through these visual components the user can interact and achieve their desired outcomes. GUIs now also take a variety of post-WIMP forms across a variety of digital, screen-based media.

Windows, icons, menus, pointer (WIMP)

We are familiar with WIMP GUIs in the software we use every day in our personal and professional lives (such as Adobe InDesign, Illustrator and Photoshop). We are used to the working metaphors of opening computer windows on our desktop, selecting menu options with a cursor pointer, and clicking on icons to perform tasks on our personal computers, DVDs, TVs and in computer games. GUIs can be found on the Web, accessed through browsers. They are on our TVs in cable/satellite channel programme guides, on our DVD and Blu-ray (BD) players, video game consoles, and in our hands with portable media devices. A WIMP GUI relies on input predominantly controlled by a computer mouse. Alternative input devices for WIMP GUIs also include a stylus, a remote control, a game controller/joystick/steering wheel or a trackpad on a laptop.

2.1
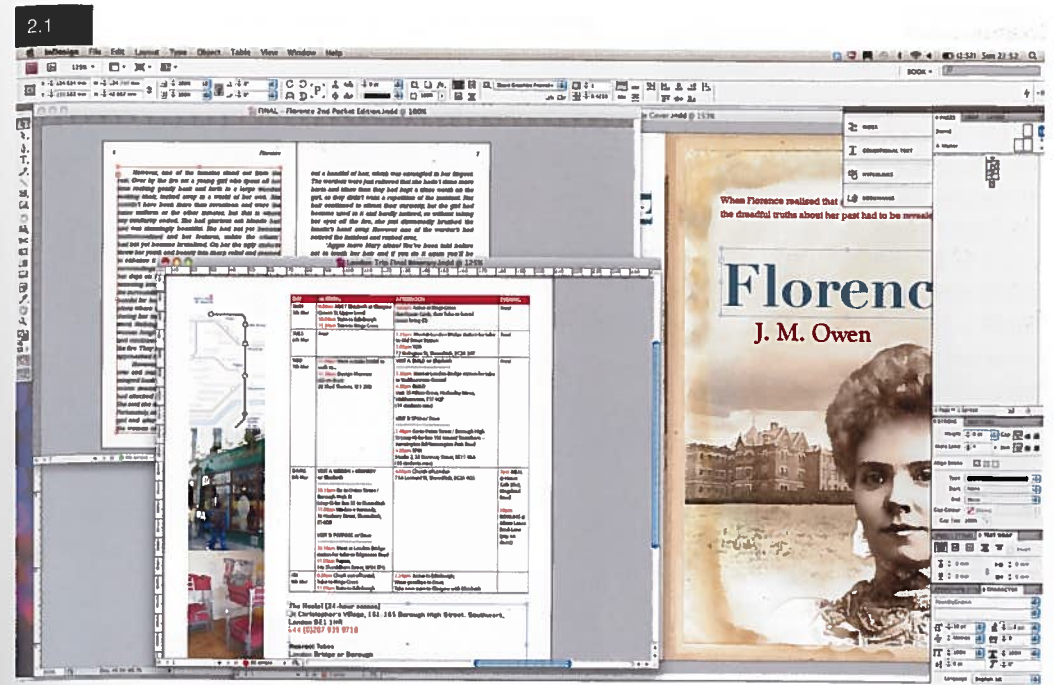
2.1
WIMP
Windows, icons, menus and pointers (WIMP) GUIs rely on input devices, such as a mouse, to make selections from menus and icons using the mouse's cursor as a pointer. The content is displayed in windows. WIMPs are visual affordances for users to interact with the computer. Although not as quick as command lines, these GUIs are much easier to use for those of us who are not computer scientists.

Post-WIMP

The personal computer is no longer bound to the desktop. The GUI is also on our smartphones, tablets and now the interaction is inputted in a more tactile and direct way. We are now in a post-WIMP world where input through a GUI to access content has become much more direct. The inputs of post-WIMP interfaces have moved beyond a mouse's pointer, allowing us to navigate windows, select menus and click icons through touch and gestures. This means that the designer can no longer rely on just designing a variation on a metaphorical WIMP interface solution. The design team needs to design for the user experience in new and exciting ways, where the *user* is the input controller.

Interaction using post-WIMP GUIs in these new apps and digital devices happens through both tactile (finger/thumb tips) and gestural (hand/body movements) sensory inputs. To successfully design for this form of interaction, the design team needs to understand the:

— psychology of the user and their requirements

— technology to be used

— desires of the client and their stakeholders

2.2

2.3

2.2
Touch interaction
Within a post-WIMP interface the design of the interactions must consider a more direct input to access the content via touch.

2.3
Kinect-embodied interaction
Post-WIMP interface design also needs to incorporate embodied interaction.

An integral part of designing for interaction is to first understand which elements need to interact with each other. Therefore it is important to know what the content will be, who it is aimed at and what technology it will be available on.

Whichever form and media the interface takes, whether it is a website, DVD, mobile app or a game interface, interaction flow needs to be revealed and structured. By understanding what needs to be connected through a GUI, the optimum interactive structure can be devised. The responsibility for this mainly falls on the shoulders of an information architect, in consultation with the design team. On behalf of the design team, the information architect designs a navigation pathway through the UI's content. The resulting interactive structure and navigation pathway is referred to as the information architecture (IA). This informs the functional form a graphical UI will take, from which the designer and developer conceptualize the most effective aesthetic user experience.

Functionality and usability

Information architecture follows a process of research, analysis and evaluation to communicate to the UI design team how the target users will obtain their goals. It ensures the interactive structure reflects an appropriate user experience. It is not enough to have functionality; that functionality needs to work for the person using it in a way that makes sense to them.

The IA focuses on making the UI structure usable, and this is of primary importance to the user. Usability begins when design facilitates the user's goals. This builds a user's confidence and raises their comfort level. In turn, the client can capitalize on a positive user experience by converting this user satisfaction into sales or leads.

Information architecture, just like traditional building architecture, comes before anything is built. By the same token, graphic design also comes before the finished build. Graphic designers can contribute to the production of the IA alongside an information architect. But what does an information architect actually do?

2.4

2.4
Navigation pathway
Information architecture reveals an optimum navigation pathway through the content to ensure goals are met prior to creating a UI roadmap diagram.

The architect of flow

Information architecture helps the graphic designer, the developer and the design team comprehend the breadth and depth of the interactivity that the UI needs to facilitate. The IA maps a flow through the content before any design or code has been created.

An information architect's role consists of several tasks: creating a content inventory, defining user personas, revealing the interactive flow and hierarchy, creating a UI roadmap diagram, and labelling all the relevant parts with 'user-facing' names.

The architect first examines the client's 'as-is' status (their current position) and their 'to-be' status (the new position the UI intends to occupy). This exposes any content gaps, dependencies, or content changes, allowing the architect to assess how far the client's desired position is from their current position. This gap analysis suggests a business strategy within which the UI will exist; the desired goals that the users of the UI will expect; and how the UI will make a return on the client's investment (ROI).

An example to explain this is suggested by UX designer Kristin Kramer. If a stationery supply company uses an e-commerce website to sell printers, the company's 'to-be' position would reflect their need to sell more printers through their UI. So as the design team's client, the stationery company would want to feature printer

X on the website's homepage, because they think that it is 'at the right price' for their customers. But the customer (user) is not just concerned about the price – they might care more about colour reproduction. The information architect will appreciate this and will ensure that both these pieces of information are clearly communicated by finding the intersection of client (want to sell printer) and customer/user (want to buy printer).

The architect will understand these conflicts and prioritize a flow solution based on user behaviour. This solution is based on research that is gathered to understand both the audience and the client's needs. The main outcome of IA is a diagram of these relationships between content areas. This diagram has many alternative names, such as site map, site hierarchy map, site diagram, blueprint, or web map. The term we'll use throughout this book is 'UI roadmap'.

2.5

2.5
Communication tools
The clear communication of important content will be managed by an information architect to ensure that the important content is accessible and that flow is maintained. This can be achieved with software such as Vision or OmniGraffle – or with low-tech pen and paper.

Visualization tools

The software from Microsoft, Omnigroup, Assure and Adobe all do similar things: draw boxes and links between boxes. Software is useful to cleanly visualize the relationships between content areas; but pens, string, paper and a wall do exactly the same thing. Some favoured IA software includes:

— Microsoft Visio

— Omnigroup OmniGraffle

— Assure Axure

— Adobe Illustrator

— Pens, sticky notes, string and a wall

The IA reveals complexity of relationships between content, and how the navigation needs to work. There are two forms that navigation takes: global and contextual.

Global navigation is available from every page of the UI. Examples include links to the homepage, to help, to print, and so on. Contextual navigation may only be available in a particular area of the UI, or on a particular subject page. An example of this would be the options on each window of a software installation where the buttons change their action-calls depending on what step of the process has been reached. Good global navigation allows the possibility of transporting the user across the UI structure to content of their choice in a non-linear way. Contextual navigation, on the other hand, allows exploration within specifically associated content.

Mapping the UI

A UI roadmap diagram allows the design team to instantly see the content and navigation hierarchy and all 'parent/child' relationships between associated content areas. It also shows whether the navigation is linear (screen following screen consecutively) or non-linear (jumping from screen to screen in any order that the user chooses). This will show where global or contextual navigation is required, and what needs to link to what.
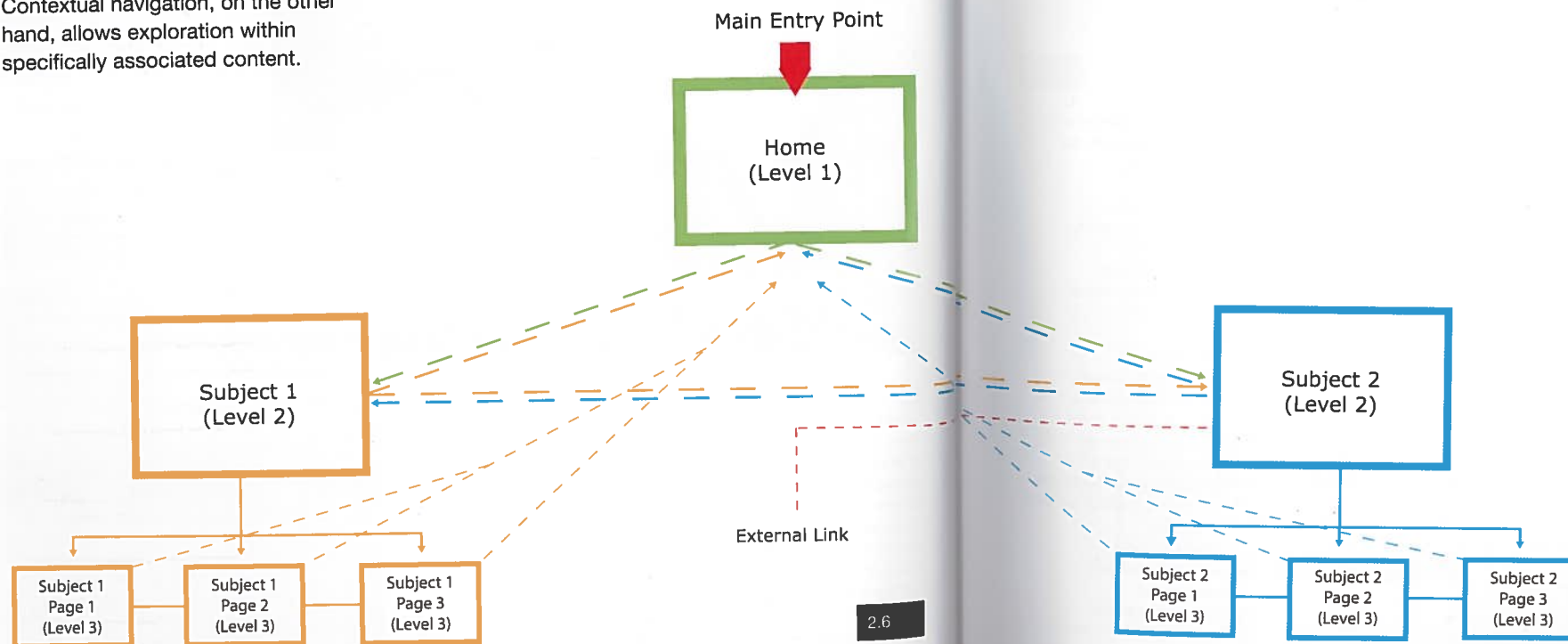
The layout of the IA as a diagram can be shown in a variety of ways. Two common methods are to use a hierarchical gridded structure, showing each level in neat rows, or to use a navigation contextual structure, showing associations. Either way, the IA content hierarchy will show the levels of association, which can be summarized as (1) main level, (2) subject groupings, and (3) subject group sub-content.

This content hierarchy mirrors similar thought processes that a graphic designer considers when designing a visual hierarchy for the UI. It is essential for a graphic designer to understand the IA process, as they can then appreciate the rationale behind the interactive structure.

2.6

2.6
Website and DVD
Information architecture is not just for the Web, it's for any interface, such as an app, a game, a DVD or Blu-ray.

— Level 1
Level 1 of the interaction includes the main entry point and immediate subject areas. Dotted lines indicate navigation and boxes indicate screens.

— Level 2
The subject areas are often on the second level of interaction.

— Level 3
The third level of content is often the specific content within each subject area. Therefore, Level 3 offers clear areas for subject-specific content. In non-linear navigation, the connections between levels are quite complex and need to be visually communicated simply through the interface design to hide the complexity.

The user needs to be able to differentiate navigation from content and all the interactive options available to them. A hierarchical structure is used to separate all the UI's distinct and group-related elements. This begins with defining a visual hierarchy of important UI elements – from high importance, to secondary and then tertiary importance. Consistency is crucial in achieving this. But context also has an important part to play. The visual hierarchy of headers, navigation and content is contextual and layered depending on which page or section of content the user is currently in. A hierarchy affords the user an effortless flow through the interface by communicating what is accessible, what is interactive, and what to do next.

Therefore, every visual element that is designed for the UI should be there to reveal important information. Any elements that are given greater prominence should be doing that for a reason, otherwise user confusion and frustration ensues.

There are standards and conventions to structuring the visual hierarchy that should be followed. This still allows a designer plenty of scope for design innovation if they consult their user research and the user personas to support their design decisions. If the personas suggest a conservative user, then conventional standards should be followed. But if the personas reveal otherwise, the designer has an opportunity to innovate a more exciting user experience, while still ensuring the user can achieve their goals.

Interface hierarchies

Graphic designers have a rich visual language that has been developed over the last century through design for print. Since the advent of the Web in the 1990s, this visual language has been adapted to embrace interactivity. An interface should be usable, and graphic designers – with a solid training in visual communication – understand that visual hierarchy helps reduce any miscommunication 'noise'.

Hierarchy helps communicate important information about interface navigation so that the user knows when navigation is global, and when it is only available within a specific context.

2.7
UI hierarchy 1
This is a visual hierarchy within a selection screen from the game *Sim City*:
(1) Screen title.
(2) Global navigation.
(3) Contextual navigation.
(4) Main content.
(5) Contextual content.
(6) Contextual information.

2.8
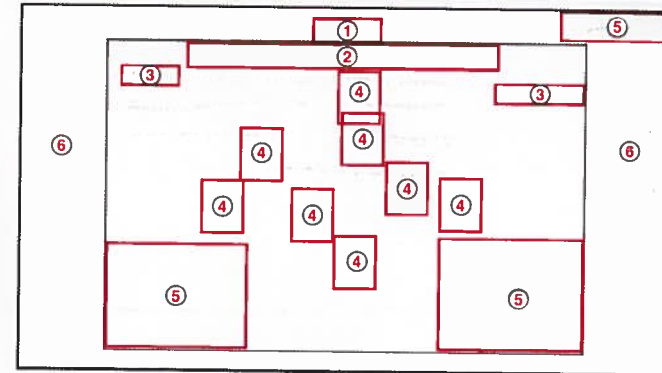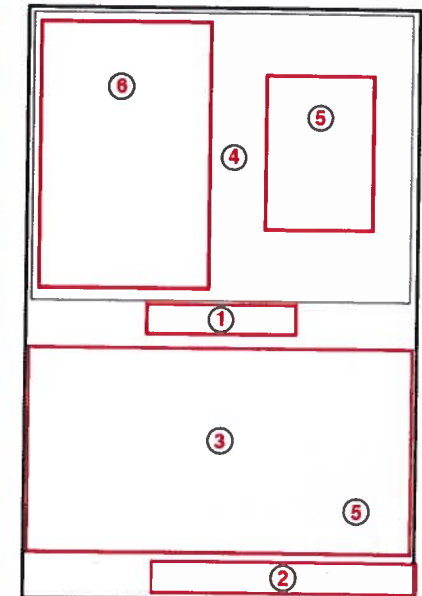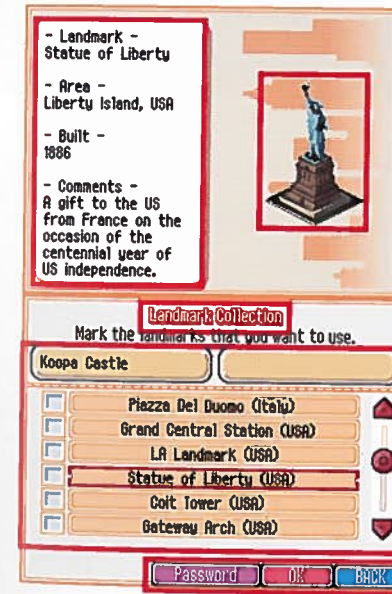**UI hierarchy 2**
The hierarchy of navigational content within a limited screen space needs to also focus on the principal goals a user will want to achieve. But within limited screen space locations will vary from a desktop version:
(1) Screen title.
(2) Global navigation.
(3) Contextual navigation.
(4) Main content.
(5) Contextual content.
(6) Contextual information.

2.7

2.8

Clarity through graphic design

The underlying hierarchical scaffold a designer uses to structure the visual elements is a grid structure. With grids come decisions on formal (highly structured) or informal (more fluid) composition of visual elements. The graphic designer will manipulate and balance these elements using symmetry, visual rhythm and frequency of repetition to help the user to understand what is being indicated as their next possible step.

This manipulation and balancing is reliant on visual weighting, allowing the eye to pass over and pause on important visual elements. Patterns, colour and textures can help identify changes in content areas. The balance of spacing and proximity of elements, the variance of line, shape, image, typography and form all help to avoid visual clutter. This crafting of the visual communication by the graphic designer creates unhindered movement and paths through the content. By building a visual hierarchy on an underlying grid, the user can be guided to those parts of the current UI screen that they are looking for.

The use of a visual hierarchy acknowledges that part of the design process is designing a positive emotional response in the user to the UI. If the interface is designed well, users will attribute their sense of delight with using the UI to a satisfying user experience. But any frustration with the UI will be blamed on the design of the interface itself. If designers have done a good job, then their interface will be invisible to the user. An invisible interface is an interface that attracts and retains user attention, with the aesthetic and functionality working harmoniously together.
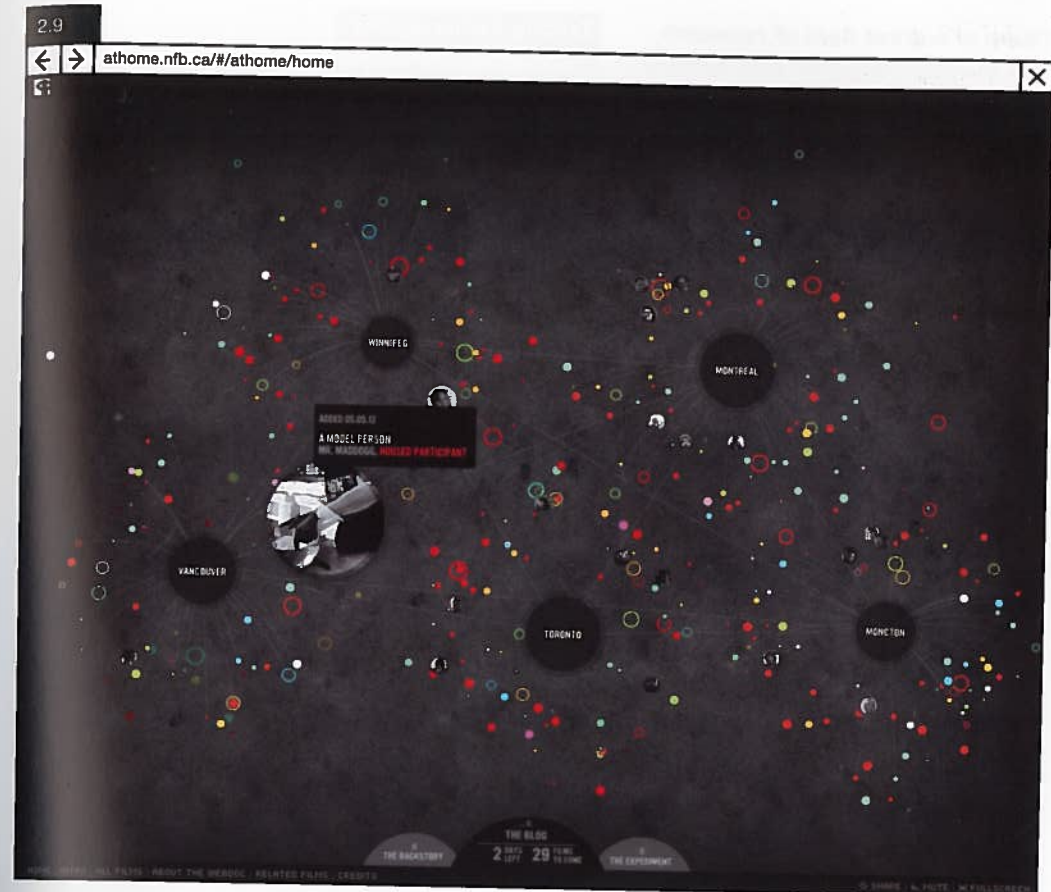
2.9
Every element
Every visual element placed on a UI screen should be there for a reason. Even in this dynamic data-driven UI from a website by The National Film Board of Canada the visual hierarchy remains clear: the user knows the title, the navigation and the content, while the site still retains a playful edge.

There is a great deal of research into human-computer interaction, in terms of what works in an interface design and what does not.

People think 'top-down', so to enhance interactivity you should make navigation obvious, convenient and easy to use. The labelling of navigation should use succinct 'user-facing' terms that they will understand. This will ensure that users have a logical path to follow through the UI. On smaller screens and tablets, the navigational information hierarchy should be restrained. To implement these conventions, it is important to test the design solutions early and often.

Testing the navigation

Whether the interface is for a website, an app, a BD (Blu-ray disc) or video game, navigation usually takes the form of tabs, menus, buttons, or hypertext links. Tabs and menus have come to indicate the navigation locations, while buttons and links indicate action. This helps the user to understand where they are within the interactive structure, and know where they can proceed to next.

If the user has no idea how to use the navigation, they will leave the UI in frustration. So testing is crucial, and that means testing the proposed UI design with 'real' users – not the design team. It is important that testing is conducted early – even at the ideation stage before any branding or coding has been done.

Examples of UI design guidelines all available in the public domain:

— GEL (Global Experience Language) the BBC's web UI guidelines for designing their interactive services www.bbc.co.uk/gel

— Mozilla's Brand Toolkit for open source developers of the Firefox browser www.mozilla.org/en-US/styleguide

— Apple's Human Interface Guidelines for iPhone, iPad and MAC OS interfaces developer.apple.com

— Alertbox website – Usability expert Jakob Nielsen's website on web usability www.nngroup.com/articles

2.10

iPhone Wireframe Template
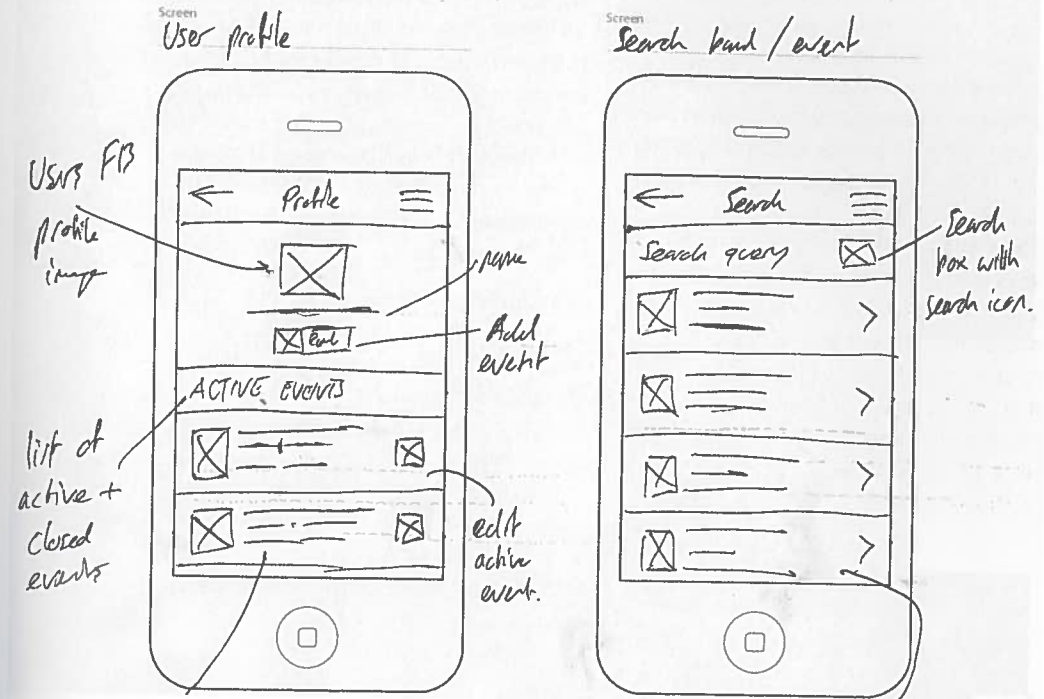
2.10
Vote Band wireframes
Global and contextual navigational flow to content are clearly indicated in these early wireframe diagrams for the VoteBand™ app. The flow from one area to the next is indicated by the handwritten annotations (wireframes will be discussed in the next section).

Wireframing

Wireframes are a useful tool with which to test the design team's assumptions early in the design phase. They reveal the underlying logic, behaviour and functionality of each UI screen. The information architecture will have shown the designer what content goes where and what needs to link to what. This information needs to ultimately become a usable, intuitive interface. But how can this be communicated to the user visually? This lies within the skill of the graphic designer, in collaboration with the design team.

The wireframe is not the finished UI design; it is a method for deciding what will need to be included. It takes the IA and considers the technical platforms that the UI will be accessed from. The wireframe also considers the input from the user (finger, thumb, mouse or gestural). In itself, a wireframe is simply a proposed layout using nothing more than lines, boxes and basic text. In this very basic way it can show possible frameworks for the visual hierarchy, navigation priorities and suitable content areas.
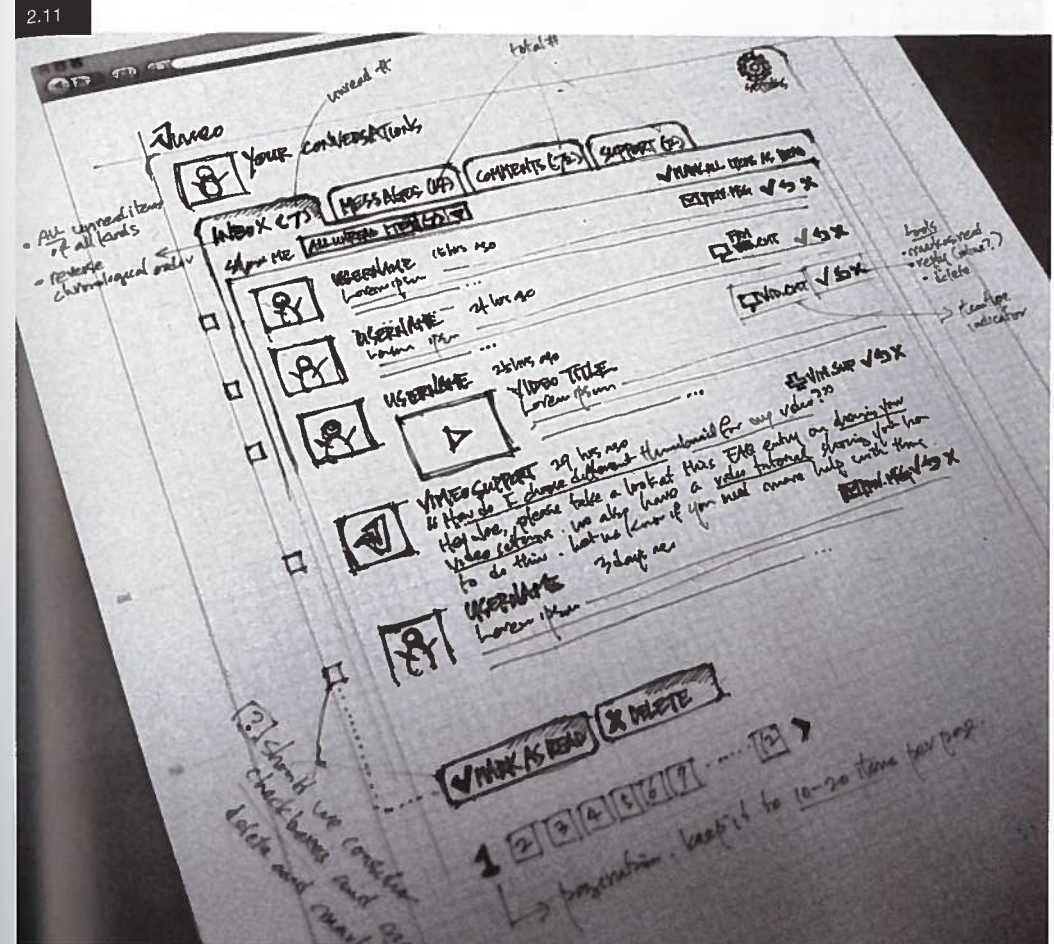
Wireframes show only boxes and minimal text devoid of any aesthetic or code, just to give a feel for what the UI needs to feature. As such, wireframing has been seen as primarily an information architect's task, but the team's graphic designer should certainly advise as early as possible on the visual communication aspects of a wireframe. This will balance the advice on the coding and user experience requirements, and won't restrict later design phases.

Wireframing all the important UI screens is crucial to communicate possible solutions, referring back to the personas (see page 27) when decisions need to be agreed. Sketched at full-pixel scale for the digital media it will be used on, a wireframe can be tested very quickly with real users in a very informal conversation. This is a quick and positive way to test the functionality of the UI so that the visual communication of it can be optimized.

Although the aesthetic is absent from a wireframe, it is still important to indicate in full scale the location of headers, footers, sidebars, navigation, content areas, and secondary links. This highlights the number of variations and reusable elements that would be needed in the final design.

Wireframes do not work when:

— they are confused with a finished design – keep them as outlines with no branding.

— they dictate an absolute layout to a designer – wireframes should still be flexible.

— a graphic designer is not engaged in a wireframe design – involve a designer.

2.11

2.11
Wireframe development
Wireframes are not the final design that just needs 'colouring in'. It is an active dialogue that will guide the designer in their design iterations. When user flow is understood, a designer in consultation with the information architect can help sketch a wireframe of all that needs to feature on each interface screen. This shows the scope of the elements that need to be included in the final graphic design for the interface.

Paper prototyping

Paper prototyping adds another dimension to what wireframing achieves. Based on the wireframe outlines, whole sections of the UI can be quickly tested for functionality, revealing any design problems.

The paper prototype is not meant to test the code or any visual communication beyond the basic interactive structure. The UI is sketched on paper – again without any branding or identity (only navigation labels and headers will be written in full). Lines of scribbles are drawn to indicate where body text will go, boxes with crosses indicate images or video.

This rough 'low-fidelity' (lo-fi) paper prototype focuses the user's feedback on the UI's functionality and interactive flow. To ensure it presents enough to test, all the main UI parts need to be drawn, such as variants of screens and elements. Users are presented with the first paper 'screen' and will be given a task to achieve. Testing around a given task in this way generates questions that demand solutions.

The testing of a paper prototype proceeds one sheet of paper at a time, with each sheet representing a window, menu, action and so on. The user will use their finger to point to 'click' where they believe links to be. With each click, the paper screen is changed to represent the next interactive step. Any additional elements, or changes needed to existing ones, can quickly be made to the paper prototype, often right in front of the user testing it.

Testing during this early design phase generates valuable communication and synergy between the design team, client and intended users. Any problem solving comes from this observation of each user and helps a designer understand user thought processes. Testing a proposed UI solution in such a lo-fi way is a valuable and cost-efficient way to convince a client of the validity of the final design solution.

To get the most out of the test, it is important that the design team only observes and lets the user dictate their flow through the interface. If possible, the design team should use video cameras to observe the user from a distance, so they do not unintentionally influence them.

2.12
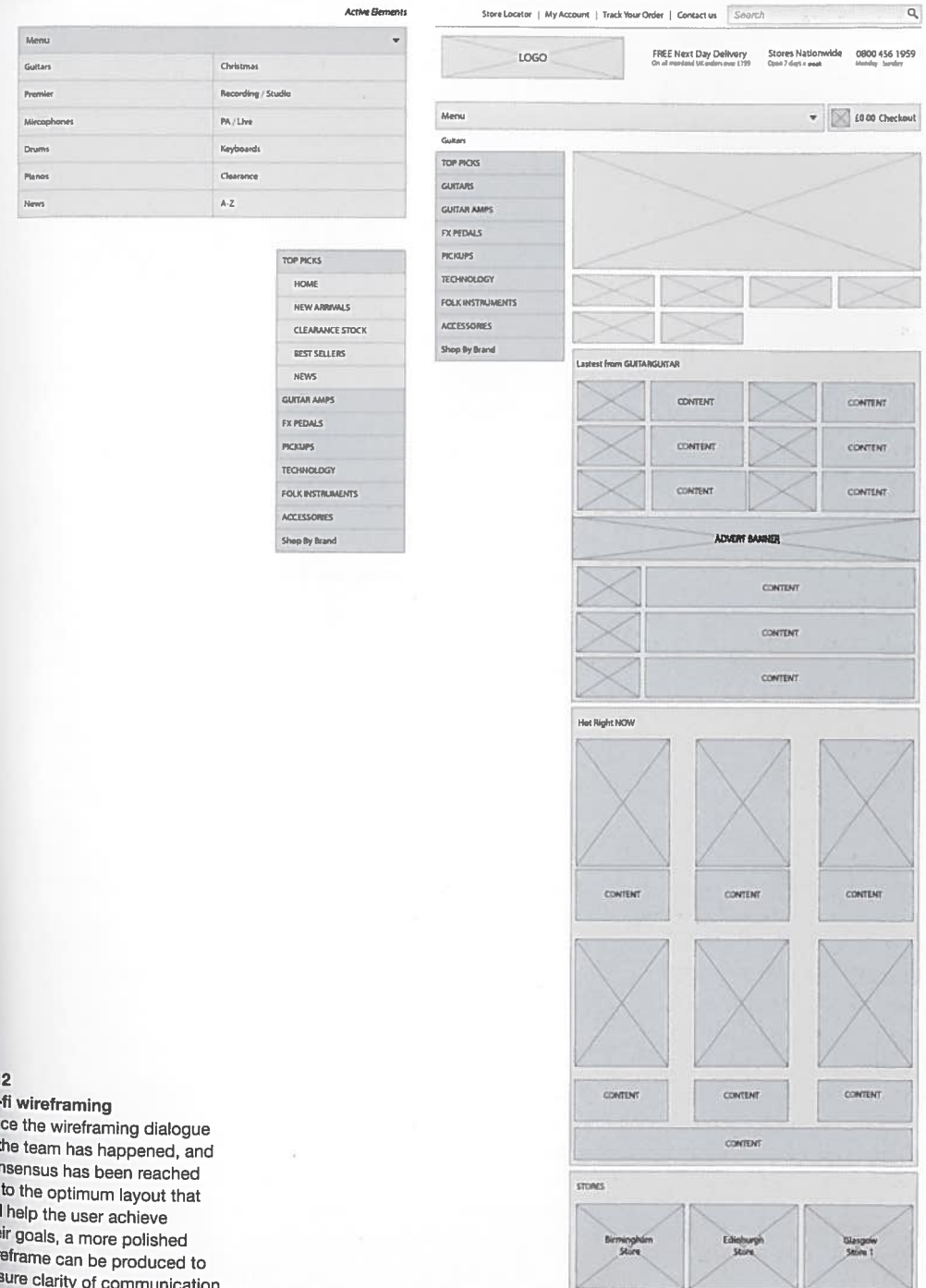
2.12
Hi-fi wireframing
Once the wireframing dialogue in the team has happened, and consensus has been reached as to the optimum layout that will help the user achieve their goals, a more polished wireframe can be produced to ensure clarity of communication.

As an undergraduate student working on your Honours project you're exploring website visual hierarchy. What is it about web hierarchy that is useful to you as a graphic design student?

Well, the reason I chose visual hierarchy is to see how to guide the user around an interface using visual elements. I think I began to delve into it when I was on exchange in Finland and learning about the theories of Jakob Nielsen and Steve Krug. I always knew I wanted to do web design. I really wanted to find out what these theories really mean.

I have categorized the hierarchy into three different visual elements: colour, layout and typography. Different typefaces you can use obviously give a tone of voice for the website. A sans serif could be used for titles and then a serif for the content areas. Colour is used to link important areas. In layout, especially in Western cultures, we read left to right. So the most important area is the top left, and the least important the bottom right. There are a lot of technical aspects about layout within web design. When you're coding you have to lay out the content so that it will work in different browsers.

The way people interact with the Internet now is with mobile phones and tablets, so you have to really consider layout for all these devices. I think that is the main difference between the layout of print and web. It's mainly to do with the coding and that you have to consider using percentages now.

So you saw the relevance between traditional print-based graphic design techniques and applying it for the Web?

Yeah. The grid has been around for ages. But the Web is new, and constantly advancing so I was able to just adapt it to this new medium.

So far in your Honours project you began by looking at wireframing to understand interactive structure. Why did you think it was important to do that?

I had to design a website for a client in another degree module. The first stage of this meant analysing websites that were similar to what the client was proposing, which was an architectural website. So I looked into seven or eight different websites to understand how they laid out the content, why they did it that way and find the most interesting examples. I did that using wireframes to really break down the content without the distraction of actual images. That then led me on to a layout for my own website design. It improved the overall website and how the user would interact with it. The feedback from the client was really good.

Role
Honours undergraduate student, Glasgow, Scotland, UK

Experience
BA(Hons) Graphic Design for Digital Media

Web
www.greggibson.
co.uk

With laying out the content, I could quickly see where things were wrong, and didn't look good, or a user couldn't interact with it. I printed out screenshots of each site, and put tracing paper over it and drew each bit. I boxed out all the navigation, the main content areas, and then tried to figure out what sort of grid system they used. It's surprising how many people don't really think about it. But when designers do actually use a grid system, you can work it out and see how they laid out the content. I guess it proved that the grid system made things look consistent, but there was also room for variation.

Have you looked into making the website dynamic to scale across any browser, on any platform, on any machine?

Yes. I think what they do in the coding is use percentages so the content can fluctuate, but they also have different stylesheets for different platforms. So if you are using it on a mobile device, it will change to a different layout. Only a certain amount of information will be displayed on the small screen compared to a laptop.

From an early stage you've had an interest in eye-tracking usability tests. What was it about that particular type of usability test that appealed to you?

When you're showing a design to a client who does not have a graphic design background, they do not really understand the layout of the content. So eye-tracking tests (see page 61) is a way of proving the methods, and giving the client facts and figures that they can understand. I can show them that if they do the design one way it won't work, but if they do it another way it will. Having the physical evidence is one of the main things I want to achieve.

**So how many people do you think you will need to test?**

I'm thinking about five to six people will be enough to have a variation on how people interact with it. I'll revise the design using the results and hopefully come up with an even better design. I'll then have the results to show why I have implemented the design in that sort of way. I'll then redo it and see if the users interact with it in a better way, and are more satisfied with it. I think with design you're always learning, especially in web design. You always have to keep pushing yourself.

Finding the flow

In a recent marketing campaign for the Chicago-based law firm Vedder Price's new London office, Fishman Marketing used eye-tracking technology to test two shortlisted website designs. Eye-tracking uses cameras to trace a user's eye movements around a screen. The data it generates can be used to determine how effective a website's visual hierarchy is.

The two designs, 'Hats' and 'Icons', were intended to help Vedder Price's new London office convey the same strategic message – that they're supporting their aviation finance practice from London, UK. The company had a complex target audience who would require different information and amounts of detail from the website. It was important for the website design to communicate an aviation- and London-focused identity to this audience, and generate income for Vedder Price's new UK-based office.

2.13
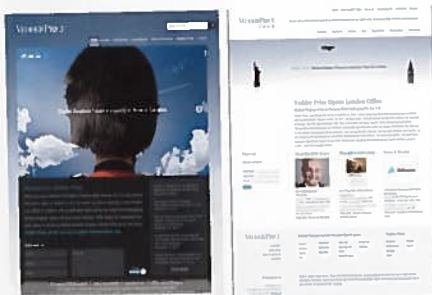
2.13
Hats and Icons
The two website ideas were 'Hats' (left) and 'Icons' (right). The former was a humorous design based around iconic British hats, and the latter was deemed more conservative, focusing on comparative icons from the USA and the UK.

2.14
Eye tracking
The eye-tracking software follows the user's eyes around the UI screen to see what areas they look at the most. These areas show up the hottest (red).

2.15
Viewing order
The eye tracking is useful in establishing the order in which the visual hierarchy is actually viewed. This information is useful for a designer in evaluating their design decisions regarding the UI's aesthetic.
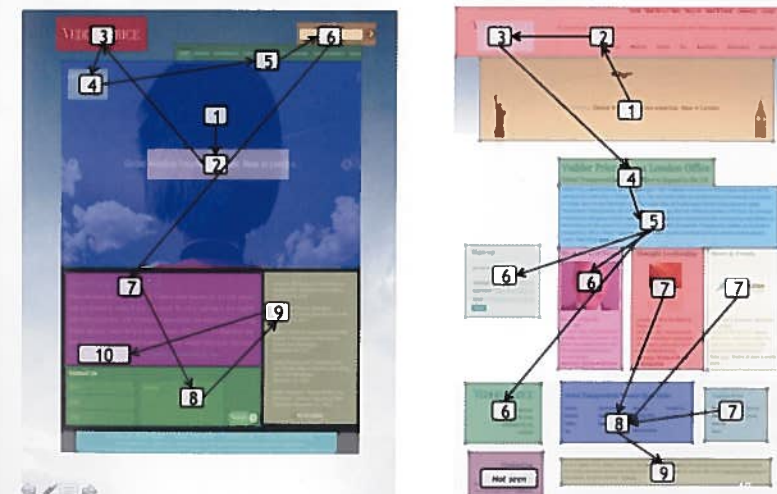
Visual attention level

More attention — Less attention

2.14

Fixation order*

*based on average time to first fixation

2.15

Testing the flow

Eye-tracking software generates data, rather than opinions, from a test audience. It helps the design team examine the order in which the users viewed the content, and for how long. The flow of each user's attention through the visual hierarchy is recorded via cameras, tracking eye movements around the screen. These eye movements create 'hotspots' on the screen, indicating the areas users looked at the most and for the longest period of time. This collected data works on a principle that users often 'scan' content rather than reading it, and such testing helps quantify the areas they spend the most time on.
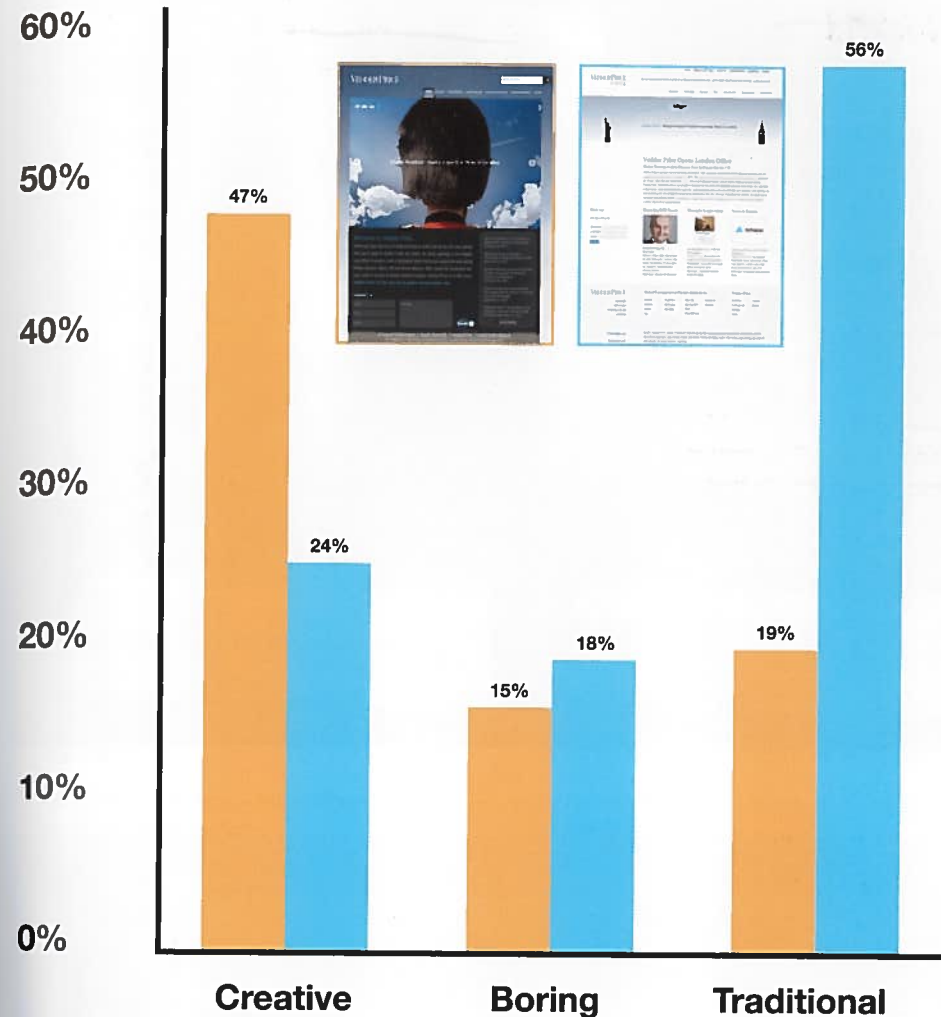
Evaluating the flow

Results from the eye-tracking testing showed that the more conservative 'Icons' design idea proved more successful to the intended audience than the 'Hats' idea. Although two thirds of those tested thought the 'Hats' idea was more creative, the aesthetic style was deemed not to be as effective as the more traditional 'Icons' idea. As the target audience was international, and needed to be comfortable with the new office's London-focused website, the 'Icons' design was chosen.

The user testers received both ideas positively, but the 'Icons' idea recorded 96 per cent of users noticing the important headline 'Vedder Price's New London Office.' They spent 2.5 seconds reading it, and then spent 4 seconds scanning the supporting news paragraph. On 'Icons', this was the fourth thing that users found, whilst it was the seventh thing that was looked at on the 'Hats' design. The use of eye tracking helped confirm that the 'Icons' website design conveyed Vedder Price's message more effectively to its target audience.

'Great UI design doesn't just make something attractive. It makes it effective.'
– Ross Fishman, Fishman Marketing

2.16
Quantitative summary
This bar chart quantitatively summarizes the data from the user tests, demonstrating perception calls on which design was qualitatively more effective.

2.17
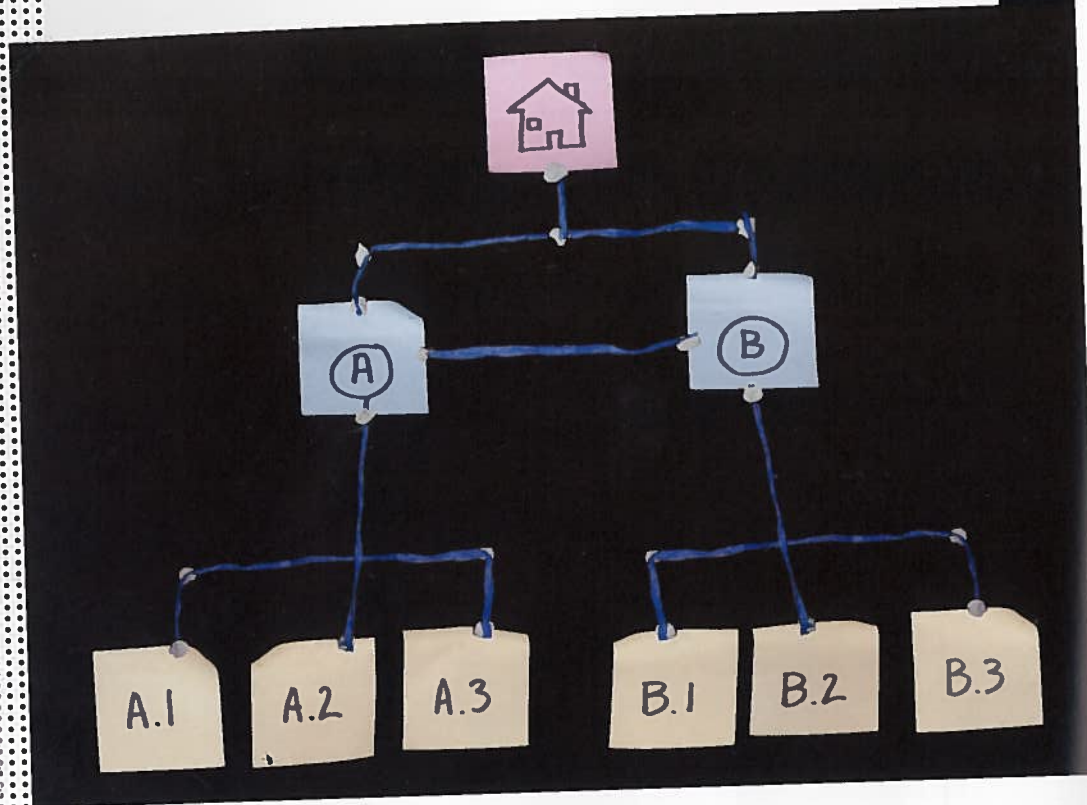
**2.17
The final outcome**
You should end up with
something like this, showing
specific content sections
(colour-coded sticky notes),
and demonstrating parent/
child relationships between the
section main page and its own
content pages. In your version
(A), (B) etc will be replaced with
the links on the homepage. A.1,
B.1 etc will be replaced with the
links on each subject page.

*Do w/ Class
↳ Chose website
to deconstruct*

Premise

In this chapter, information
architecture and hierarchy (of
navigation, content and the
visual) have been discussed.
Understanding underlying
interactive structure is important
to the design of a successful UI.
But where does this
understanding begin?

This exercise will allow you to
understand flow by deconstructing
an existing interface. What you
learn can inspire and inform you in
any future UI design projects. You
can conduct this task on your own
or in groups, and it only requires
four things:

— **sticky notes in several colours**

— **string (different coloured
cotton, wool or twine would
be fine)**

— **Blu Tack (or any reusable
wall display putty)**

— **a big wall.**

Exercise

1 Choose an existing small UI.

2 Write 'Homepage' on a colour
sticky note and place it centrally on
the wall. This is level 1.

3 Write on a different colour sticky
note, each section/subject name
that appears on the homepage
('About', 'Contact', etc). Place
these in a row underneath the
'Homepage' note. The colour
change indicates that these pages
are at level 2.

4 Using the string and wall putty,
connect the 'Homepage' to the level
2 subject pages.

5 Now focusing on each subject page
separately, look at what links are in
that section (for example, the 'About'
section pages may feature pages on
'History,' 'Team', etc). Use a smaller
sticky note to record these sub-pages
that form level 3.

6 Stick these smaller sticky notes on
the wall under their 'parent' section,
grouping them under their subject to
show association and context.

7 Using string, connect these smaller
sticky notes to each other and to
their parent.

8 After repeating steps 5, 6 and 7 for
each section/subject area, use a
different colour string to connect
each page BACK to the homepage,
AND to any other page that is linked.

Note: For this exercise, stop at LEVEL 3,
even if the chosen website has
more levels.

Outcomes

You should see a very rough hierarchy of
interactions on the wall across the three
content levels. Is the revealed interactive
structure far more complex than you
initially thought it would be? This
technique works for any form of UI (BD/
DVD, app, even game UI). It makes you
deconstruct the complex flow of how
content is made accessible to
the user.