Lecture 12
Graphics & Visuals – a picture paints a thousand words
Familiar icons & symbols – what do they represent?
Familiar signs
Why is the study of visual communication important?

- Our culture places much emphasis on the visual – *seeing is believing*
- Visual communication is faster and more easily processed
- Visuals and graphics add another layer of meaning and another way of communicating
- Visuals actively engage the brain in interpretation, making it more likely that readers will remember the information
Elements of visual literacy

- Graphic principles highlight the relationships between
  - elements of text
  - text and images
  - different representations of data
- These principles include:
  - Size
  - Colour
  - Proximity
  - Arrangement
  - Context
  - Repetition
  - Contrast
  - Alignment
Proximity

- Group related items together (physically close to one another) to enhance their cohesion and give the reader a clear idea of the organization and content of the page.
- This is how white space "works".
- Don’t put too much space between headings and the information they introduce.
- Unrelated items should be moved farther away and grouped by some unifying device eg colour, text box etc.
Alignment

- Nothing should be placed on a page (or screen) arbitrarily. Every item should be visually connected to something else on the page.
- Proximity shows the relationship of parts to one another; alignment shows that the parts all contribute to the whole.
- Centered alignments are relatively sedate; flush right/ left strengthen the overall sense of design.
- Once everything is aligned, then you can break the rule to focus attention (visuals bleeding though their frame).
Repetition

- Repeat some element of the design throughout the whole piece – a bold font, thick line, bullet, etc.
- Repetition of headings and boldface type gives readers a sense of internal consistency.
- Repetition of design elements between related pieces supports corporate identity.
Contrast

- Contrast adds excitement to design, forces the reader to pay attention, and indicates hierarchies and oppositions within the page.
- If two items are not really the same, make them really different! – Otherwise you have confusion, not contrast.
- Contrasts must be strong.

"Don't be a wimp!"
How do graphics & visuals enhance & supplement a report?

- Make points vivid and help readers “see” data
- Present information more compactly than words
- Convey/ simplify complex data
- Demonstrate contrasts/ comparisons
- Suggest movements/ trends over time
- Emphasise physical appearance
How do graphics & visuals enhance & supplement a report?

- Analyse concepts/processes/abstract relationships
- Should not replace text
- Should be properly incorporated and referenced eg ‘… as shown in figure 1…’
- Different graphics serve different purposes – choose the right visual for the story and the data
- Ensure each visual is accurate and ethical
All visuals share certain conventions

- Identify an analytic perspective for the data with an interpretative *title*
- Clearly describe the *type of data* (survey or projection)
- Label the *units* (e.g. slices in a pie chart)
- Label the *axes* and use a *legend*
- List the *source of the data* or acknowledge the *source of the visual* (if copied)
- Integrate into text with *table/figure numbers*
What’s wrong with this graphic?

- Has there been a growth in the number of bananas between 1960 and 1980?
- Or have the bananas grown increased in size?

Source: Sadler & Tucker, 1981, 116
Line graphs

✓ Indicate movements over time, compare frequency, identify correlations

✗ Inappropriate labels and scales can make them difficult to interpret

Q Q: What is the difference between these two graphs?

Source: Sadler & Tucker, 1981, 116
Line graphs

- Put time on the horizontal axis
- Avoid more than 3 or 4 lines
- Use only 2 lines if they cross a lot
- Use different colours and a legend
- Label the axes
- Avoid perspective

Source: Gould

www.rpi.edu/~goulde/co_su02/viscom.ppt
Poor example

Source: Gould www.rpi.edu/~goulde/co_su02/viscom.ppt
Column or vertical bar graph

- Compare items, show distributions or highlight correlations
- Different bar charts for different purposes
  - Grouped (compare aspects of each item across time)
  - Segmented, subdivided or stacked (helps compare totals but cannot compare segments)
  - Deviation (identify opposites)
  - Paired (show correlation between two items)
- Difficult for the eye to interpret size and proportions

Source: Eunson, 1995, 79
Grouped bar charts allow comparison.

Extra Staff in East Increased Sales in 3rd Q

Source: Gould  www.rpi.edu/~goulde/co_su02/viscom.ppt
Segmented, subdivided, stacked bar charts show different relationships.

**Extra Staff in East Increased Sales in 3rd Q**

- **North**
  - 1st Qtr
  - 2nd Qtr
  - 3rd Qtr
  - 4th Qtr

- **West**
  - 1st Qtr
  - 2nd Qtr
  - 3rd Qtr
  - 4th Qtr

- **East**
  - 1st Qtr
  - 2nd Qtr
  - 3rd Qtr
  - 4th Qtr

Source: Gould [www.rpi.edu/~goulde/co_su02/viscom.ppt](http://www.rpi.edu/~goulde/co_su02/viscom.ppt)
Deviation bar charts show exceptions.

1998 Sales Relative to 1997

Source: Gould [link](http://www.rpi.edu/~goulde/co_su02/viscom.ppt)
Bar chart design

- Use a logical order
  - Chronological
  - By region
- Put bars close enough for comparison
- Label both axes and make increments consistent
- Make all bars the same width
- Use colours for coding (not just “to look good”)
- Avoid “chart junk” – especially 3D views
Chart junk

Source: Gould www.rpi.edu/~goulde/co_su02/viscom.ppt
Pie charts

✓ Show relative proportions and the importance of each part to the whole
✓ Label segments and proportions outside the pie
✓ Limit segments to 5-7

✗ Can be difficult to judge area and size differences therefore should not be used to exactly compare segments

Source: Eunson, 1995, 78
North Region Leads 1st Q Sales

- North: 45.9 million
- West: 30.6 million
- East: 20.4 million

Source: www.rpi.edu/~goulde/co_su02/viscom.ppt
Poor example

North Region Leads 1st Q Sales

- East: 10.2%
- Northeast: 15.7%
- North: 25.3%
- Central: 15.6%
- West: 12.6%
- Island: 20.4%

Source: Gould www.rpi.edu/~goulde/co_su02/viscom.ppt
Tables

✓ Offer clear comprehensive detail
✓ Allow comparison between large amounts of data
✓ Make readers focus on the raw data not your interpretation of the data
✓ How you set out the table can affect interpretation

✗ Difficult to read quickly
✗ Hard to recognise relationships
Even tables can tell different stories – compare …

<table>
<thead>
<tr>
<th>Season</th>
<th>Florida</th>
<th>Alaska</th>
<th>New York City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>23 m</td>
<td>2 m</td>
<td>10 m</td>
</tr>
<tr>
<td>Summer</td>
<td>10 m</td>
<td>13 m</td>
<td>12.5 m</td>
</tr>
<tr>
<td>Fall</td>
<td>13.3 m</td>
<td>3 m</td>
<td>12.5 m</td>
</tr>
<tr>
<td>Winter</td>
<td>49 m</td>
<td>2 m</td>
<td>15.5 m</td>
</tr>
<tr>
<td>Total</td>
<td>95.3 m</td>
<td>20 m</td>
<td>50.5 m</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Spring</th>
<th>Summer</th>
<th>Fall</th>
<th>Winter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Florida</td>
<td>25%</td>
<td>10%</td>
<td>15%</td>
<td>50%</td>
</tr>
<tr>
<td>Alaska</td>
<td>10%</td>
<td>65%</td>
<td>15%</td>
<td>10%</td>
</tr>
<tr>
<td>New York City</td>
<td>20%</td>
<td>25%</td>
<td>25%</td>
<td>30%</td>
</tr>
</tbody>
</table>

Source: Gould www.rpi.edu/~goulde/co_su02/viscom.ppt
Summary of charts

- Use charts to simplify data
- Pick an appropriate style – bar charts are most common for business audiences
- Provide an interpretative title – you want your readers to understand the data in a way that supports your arguments, not theirs
- Avoid “chart junk”
Diagrams

- Allow emphasis to be placed on the details of interest by presenting a simple representation.
- Can show a cross section and allow views that are not available in photos.
- Easy to miss the main point if the diagram becomes too cluttered.
Photographs

- Shows subject as it appears, has an immediate impact
- Creates perception of authenticity
- Can be difficult to see the point because of detail – may need to be cropped so that key point is not lost
- Can be easily manipulated or set up
- Can be misinterpreted when taken out of context
The camera never lies … or does it?

Humorous or serious?

Source: www.vincepinto.com
Potential for world conflict

Source: www.smh.com.au
Cartoons can be fun ...

“Well, thank God we all made it out in time. ... 'Course, now we're equally screwed.”

“I’m leaving you, Frank, because you’re a shiftless, low-down, good-for-nothing imbecile ... and, might I finally add, you have the head of a chicken.”
Or have a serious message …

Source: www.smh.com
Why is layout important? Hints for sharp layout

- Layout is the “non verbal” aspect of written communication
- Headings, subheadings and numbering act as signposts to guide your reader
- Body text should be between 10 and 12 point. Headings can be larger
- Use the same typeface, type size and leading (line spacing) for all your body copy
- Use enough leading to make the text easy to read – usually 1 or 2 points more than your text
Hints for sharp layout

- Make paragraph beginnings clear – paragraph space is preferable to indentation
- Ragged right margins make text look more visually interesting
- Leave more space above headlines and subheads than below them. Use subheads liberally to help readers find what they are looking for
- White space used skilfully can be used to show readers where to start and where to stop. It can isolate important messages
Hints for a sharp layout

- If you choose a design device use it throughout the document to establish a recognisable pattern. For example
  - Signals used (arrows or numbers)
  - Words or terms used for captions
  - Format of questions or headings
  - Use of screened backgrounds
  - Typeface and type size used for text, headings and captions
Line spacing

Text is difficult to read when the lines are positioned too close together.

Too much space between lines make the thought seem disconnected.

Text is most legible when the line separation is about 1 1/2 times the letter height.
### Did you know that … ?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Readable Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%</td>
<td>HEADLINES, KICKERS, PHOTO CAPTIONS (and look at the photos)</td>
</tr>
<tr>
<td>70%</td>
<td>SUBHEADS, UNDERLINED ITEMS, BULLETS, BOLDFACED ITEMS, QUOTES, ILLUSTRATION CAPTIONS</td>
</tr>
<tr>
<td>5% – 30%</td>
<td>TEXT</td>
</tr>
</tbody>
</table>
Don’t use too many fonts, in terms of *typeface* and *size*. The general feeling is to limit yourself to 3 different *type settings*. Also variable width fonts such as Times New Roman are easier to read than *fixed width fonts* such as *courier*. STUDIES SHOW THAT TEXT IN ALL CAPS SLOWS READING BY 12% SO YOU SHOULD MIX CASE.

The same goes for justified text, so that is something of which to be aware. Also short justified lines are to be avoided, but that should be common sense.
Can you read this?

Is this line visible?
IF IT’S ALL CAPS DOES IT HELP?

Do you find this typestyle easy to read?

This is readable type, but the color is wrong.

Remember 5% of the male population is colour blind; don’t put important information in red text.

Does it help to underline a whole sentence or a paragraph of type?

IF IT’S ALL CAPS DOES IT HELP?

HOW ABOUT SCRIPT IN ALL CAPS?

This is a san serif type, this is serif.
Type size

This is 12 point type
This is 18 point type
This is 24 point type
This is 30 point type
This is 36 point type
This is 48 point type
This is 60 point type
Choose an appropriate typeface

Typeface styles have inherent meanings

You are invited to an
Event of Pomp & Ceremony

Financial Management

Visit Treasure Island

Hello Gorgeous

Bed & Breakfast

So choose one that suits the style and audience of your message
Or the consequences can be disastrous ...
Finally … for fans of “Burgo’s Catchphrase” here is an IQ test

Going
death
MIND

cccccccccccc
Life
MATTER

R E A D I N G

O
No
No
No
No

M.D.
B.A.
Ph.D.

R
ROAD
S

Punch

A
D
S

No
No
No
No