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FUNDAMENTALS

Using PowerPoint

KEITH BELLAMY AND DEE MCLEAN

PowerPoint is a very flexible program and, for the most part, there is no right and wrong way to do things. Views expressed here are those of the authors and the methods used have been tried and tested. There are three articles in the series. The first article looks at the design issues that need to be considered when preparing a PowerPoint presentation. The second article will concentrate on the 'mechanics' of the program, and the third article will address issues around delivering the presentation. It is hoped that this series will stimulate others to contribute ideas, tips and experiences that can be built into a useful resource. Any contributions should be addressed to the Editor.

Introduction

Most medical illustrators have a working knowledge of PowerPoint and may even use it on a regular basis in their daily work. As the use of data projection continues to replace traditional 35mm slides and overhead projection as the visual aid of choice amongst our users, they have tended to bypass the medical illustration department to create their own presentations. Inevitably some will be better at it than others and there is still an opportunity for the medical illustrator to be seen as the expert, offering advice, running courses, and solving technical problems. The purpose of this series of articles is to reaffirm some basic ideas about the design, construction, and use of visual material as an aid to teaching, and to provide an insight into how PowerPoint can be used to facilitate best practice.

Planning

> *'A visual aid is not an aid unless it performs a specific function and performs it well'.*[1]

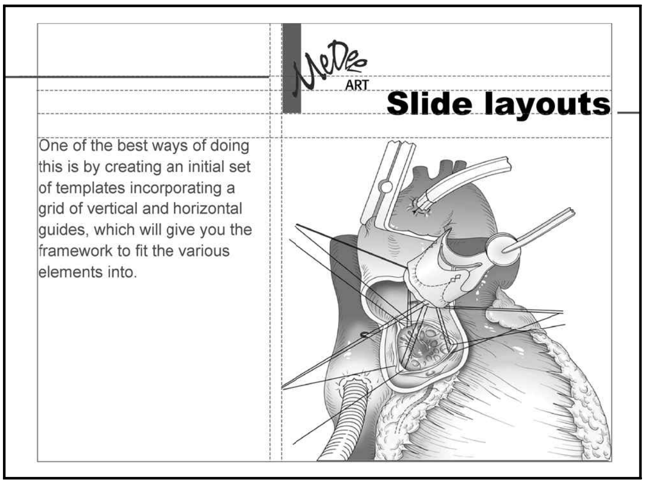
Planning a presentation is best achieved away from the computer, using pencil and paper. As a rough guide you should aim for one slide for every minute of your talk. The reason for using visual aids is to assist comprehension, but this will only be achieved if each individual slide has a specific job to do and is shown at the appropriate time.[2] Many people make the mistake of leaving a slide on screen long after they have finished discussing the contents, which is confusing for the audience. If you do not have a slide that illustrates a particular point you are making, then it is better to have a blank screen.

Decide what elements need to be included – text, charts/graphs, tables, photographs, illustrations, diagrams, clip art, sounds, video. Do not make the mistake of using the slides to repeat verbatim what you are saying. Slides should be like newspaper headlines or signposts that 'guide' the audience through your talk.

Introduce one idea at a time – this will help keep your slides simple and uncluttered. Try to limit bullet lists to no more than five points. The watchwords are ***Simplicity, Legibility*** and ***Suitability***.

Design

The elements that go to make up the overall design of the presentation include the placement of each component (text, images, etc.), the choice of font(s), and the colour scheme. Using the PowerPoint slide layouts and guides (View/Guides), create your own grid design (*Figure 1*). This will give you a framework in which to operate. Remember that the aim is to take the various elements and compose them to create a satisfactory whole, giving balance, weight and poise to the slide – achieving equilibrium.



Slide layouts

One of the best ways of doing this is by creating an initial set of templates incorporating a grid of vertical and horizontal guides, which will give you the framework to fit the various elements into.

Figure 1. *Illustration showing the grid used for these PowerPoint slides. To create a grid using the guides in PowerPoint go to* **View-Guides**. *One horizontal and one vertical guide line will appear. Click and drag on these to move them. Click and drag holding down the* **alt** *key (Mac) or control key (PC) to duplicate them and set up your template.*

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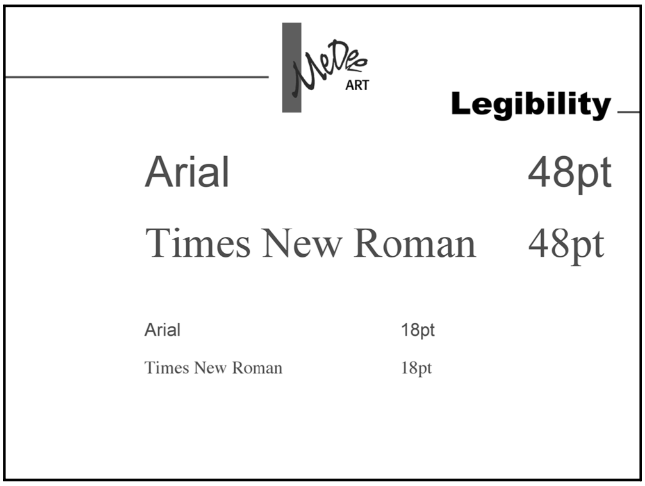
Fonts

There are two types of font, *Serif* and *Sans serif*. Serif fonts have short lines (serifs) extending from the upper and lower ends of the strokes of letters. They include fonts such as Times and Palatino, and are almost always used where there are large blocks of text, such as in books and magazines. In such circumstances the serifs aid reading by helping the eye 'flow' along the lines of text. Sans serif fonts, which have no extension lines, were first used by sign writers and are always used for road signs. They include fonts such as Arial and Helvetica and are probably more legible for projected material, especially when using smaller font sizes (*Figure 2*).

Whatever the choice, do not use more than two different fonts in each presentation. Perhaps one font (serif?) for the headings and subheadings and another (sans serif?) for the body text and annotations. (NB. Do not assume that the fonts you have chosen will be available on every machine. If you are using non-standard fonts you must arrange for them to be loaded on the machine you are using for your presentation. It is for this reason we recommend you stick to these cross-platform fonts: Arial, Arial Black, Arial Narrow, Bookman Old Style, Century Gothic, Comic Sans, Courier New, Garamond, Hattenschweiller, Impact, Monotype Corsiva, Symbol, Tahoma, Times New Roman, Trebuchet, Verdana, Webdings, Wingdings.)

The size of the font will have a direct bearing on legibility (remember to design for the back row of the audience). Headings and subheadings should be between 28 and 48pt. Body text and annotations should be between 18 and 28pt. Anything below 18pt will be hard to read, especially in a large auditorium. A set of slides will match better if the text sizes of headings, subheadings and body text are consistent throughout, therefore the decisions will depend on the longest heading and subheading and largest block of body text. Where a slide has little information (perhaps only two bullet points) it is not recommended that you increase the font size to fill the space. A better way may be to adjust the space between lines using the Format menu (Format/Line Spacing).

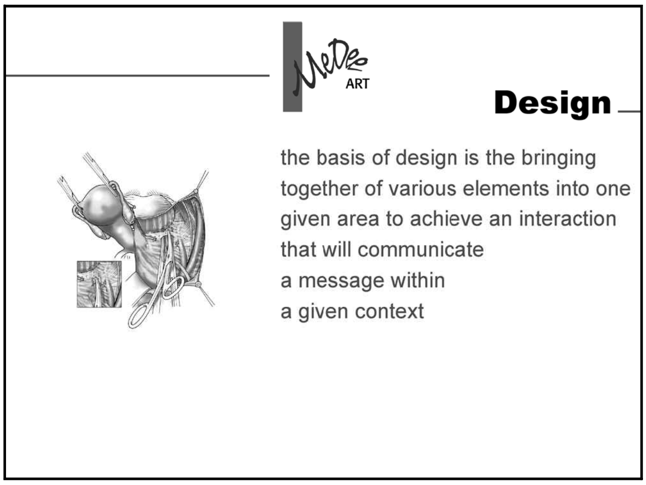


ART

Legibility

Arial	48pt
Times New Roman	48pt
Arial	18pt
Times New Roman	18pt

Figure 2. *Illustration comparing a* **Serif** *font (Times New Roman) with a* **Sans serif** *(Arial), within the context of a PowerPoint slide.*



ART

Design

the basis of design is the bringing
together of various elements into one
given area to achieve an interaction
that will communicate
a message within
a given context

Figure 3. *Illustration showing placement of* **heading** *(range right) and* **text** *(range left) within the template. These should, ideally, be kept consistent throughout especially where there are a large number of text slides.*

Do not be tempted to use all capital letters (especially in blocks of body text). It makes comprehension slower because capital letters are all the same height (we read by recognizing word shapes, not the individual letters that go to make up a word).

Headings

Headings may be left aligned, centred or right aligned using the Formatting toolbar (View/Toolbars/Formatting). Body text will invariably look better if it is left aligned. Centred text is harder to comprehend because the start of the next line is more difficult to locate, and justified text (while looking neat) can lead to overlarge spaces between words.

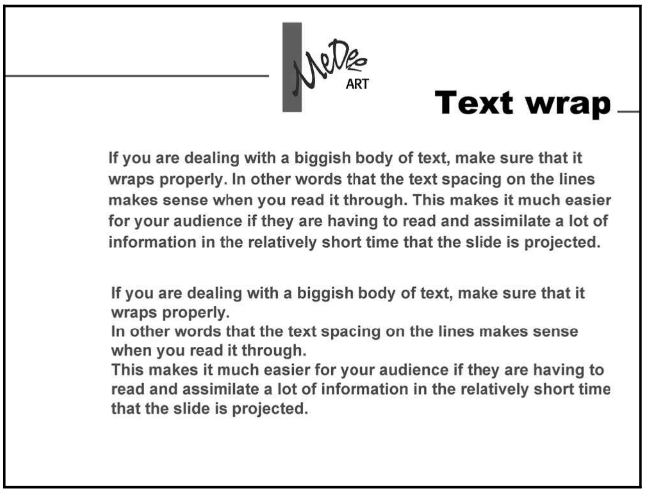
Be consistent between slides, in the placing of headings and the start letter of blocks of body text. Your audience will quickly become familiar with where information is located on your slides, which again will aid comprehension (*Figure 3*).

Text Wrap

Having sized all the blocks of text, it is important that they are examined for where natural word wrap occurs. Adjustments can be made to aid comprehension (*Figure 4*).

Colour

There are two types of colour scheme – positive (light background with dark text) and negative (dark background with light text). As a general rule of thumb, if the talk is taking place in a small room where the blackout conditions cannot be totally controlled (such as a seminar room) then a positive colour scheme works best. If the talk is in a lecture theatre where ambient light can be completely controlled, then a negative colour scheme may be more suitable. In both cases it is important there is good contrast between the foreground and background.



Text wrap

If you are dealing with a biggish body of text, make sure that it wraps properly. In other words that the text spacing on the lines makes sense when you read it through. This makes it much easier for your audience if they are having to read and assimilate a lot of information in the relatively short time that the slide is projected.

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Figure 4. *If you are dealing with a large body of text, make sure that it wraps properly. In other words, ensure that the text spacing on the lines makes sense when you read it through. This makes it much easier for your audience if they have to read and assimilate a lot of information in the relatively short time that the slide is projected. Compare the top block of text with the bottom block.*

Some colour combinations should be avoided, such as red on either a blue or black background, and remember that a significant number of the population are red/green colour blind. The most popular colour scheme is white and/or yellow on a dark blue background. This is a very ‘restful’ colour scheme for the audience and will work in almost any given situation.

PowerPoint provides the user with some ready colour schemes found under the Format menu (Format/Slide Colour Scheme). There are a number of schemes available under the Standard tab or if preferred each of the eight colours can be changed under the Custom tab, to make a new colour scheme. Any new scheme can be added to the Standard tab by clicking ‘Add As Standard Scheme’. Although these are only saved in that particular presentation, this is a useful feature when designing a presentation, allowing comparison of various schemes.

Beware of using too many colours, as this can be very distracting for the audience. The subtle use of compatible colours or shades of one single colour can often create the most dynamic effect.

In addition to ready-made colour schemes, PowerPoint also provides a number of templates that include a colour scheme coupled with design features. They can be selected from the Format menu (Format/Slide Design Templates). For the most part these are too fussy and should be avoided. However, from the same menu (Format/Slide Design Templates) it is possible to navigate to any PowerPoint file available on your machine (by changing the ‘Files of type’ to ‘All PowerPoint Files’) and use that as a template. This makes adopting a corporate style very easy. It is also possible to save any file as a Design Template (File/Save As and changing ‘Save as type’ to ‘Design Templates’), which automatically places the file in the Presentation Designs folder.

Master Slide

Global changes are best made using the master slide (View/Master/Slide Master). So having chosen your font(s), calculated the longest heading and subheading, and the largest block of body text, change the font characteristics accordingly in the master slide view. You may also add your chosen colour scheme at this stage, although many users prefer to work in black-and-white until all the content is added, then apply the colour scheme at the end. The master slide is a very useful and powerful feature within PowerPoint and we shall look more closely at its use in the next article.

Summary

In summary, it is best to design your presentation and decide all the content before switching on your computer. When selecting content, make sure each slide has a specific job to do. Think carefully about the choice of font(s) and colour scheme, bearing in mind the venue for your presentation and use the master slide to make all the necessary set-up changes.

References

1. Romiszowski AJ. *The selection and use of instructional media.* London: Kogan Page, 1988.
2. Gilder RS. Left brain-right brain theory and the design of medical teaching materials. *J Audiov Media Med* 1983; **5:** 45–50.

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