Information Design
for Effective Multimedia Presentations

Introduction
The purpose of a multimedia presentation is to inform an audience — to educate, promote an ideology, change a behavior or introduce a product — faster and more persuasively than written or spoken words. For this reason, PowerPoint software has become the prima lingua for business, scientific and educational communication.

Too often, however, the visual component of audio-visual is regarded as a peripheral, decorative or creative function, resulting in distracting, misleading, and generally ineffective presentations that leave audiences puzzled and fatigued rather than informed and motivated.

Research shows that during a multimedia presentation, an audience attempts to reconcile visible and audible stimuli — to organize the input, retain the key points and find new meaning based on their existing knowledge — in short, by asking what is this, where is it going, and how will it help me? As each new slide appears, the audience must be allowed to answer those questions within a few seconds — after which the cognitive faculties begin to overload and the information is more likely to be forgotten.

Method
This simple formula will be used in the example that follows, to highlight relevance, create context and achieve simplicity:

1. Actively select, organize and prioritize the information
2. Eliminate extraneous material

Example
The formula can be applied to any presentation, intended for any audience. The example slide was presented to physicians at a continuing medical education (CME) conference, and its purpose is to show that “among patients presenting with symptoms of angina, women are more likely to have non-obstructive cardiac disease” (or, female patients are more likely than men to have unblocked arteries).

The original diagram (right) appeared in a medical journal in 1979. After a typical PowerPoint reformatting (“before,”), the colorized slide is plagued with the same design problems as the original. The final slide (“after”) — the result of a collaboration among scientific, editorial and design staff — demonstrates how presentations can instead be designed in a way that successfully supports the presenter’s narrative.

Other scientific data are shown here to demonstrate how design methods can be applied to statistical charts. No relationship with the researchers, presenters, writers, institutions or other publications in which the information appears is stated or implied.
PowerPoint is a registered trademark of Microsoft.
Here is a description of how the reformatted PowerPoint slide ("before") will be revised in the final example ("after"):

- **The slide title** “Angiographic Findings...” is obtuse, leaving the audience to spend precious seconds wondering what those findings are. A new slide title creates context by clearly stating the conclusion, which will be proven by data in the redesigned charts.

- **Color:** Only six of the 30 data points are germane to the presentation — those showing patients with non-obstructive disease (red). But the application of five dissimilar, fully saturated colors in an arbitrary sequence creates maximum visual tension while wringing any real meaning from the graphic. In the final example, only one color will be used, to prioritize key information.

- **The text** has all been set at the same size in the “before” example, further impeding the audience’s ability to discern which information is important. Further, almost all of the text is redundant or otherwise unnecessary. For example, the chart legend is displayed, in various ways, nine times on this one slide.

- **Distortions in the data:** Although two column charts were created with similar height and width, the software’s default settings automatically calculated a different y-axis value on each chart (50% for men, 70% for women).

- Notice that in the “before” example, each group of five columns adds to 100%, and represents one group of patients — not five, as the multi-colored columns imply. Reorganizing the data into pie charts will solve this and the two previous problems — eliminating the distortions caused by the inconsistent y-axes, and eliminating unnecessary text.

- While the presenter states that “women are more likely than men,” the “before” slide shows the reverse — study results for men are shown first, then results for women. This will be corrected in the “after” example.

The slide now supports the presenter’s narrative by clearly showing proof that “women are more likely to present with symptoms of angina having non-obstructive cardiac disease.”

**Summary**

This example demonstrates that an important, well written, meticulously edited, legally examined, client approved and authoritatively delivered narrative can be — and often is — undermined by poor design. Analysis and visual reinterpretation of the presentation content is an integral, executive-level, strategic business solution, the value of which is realized in the effectiveness of the final product, leading to audience satisfaction, client retention and new business development.