Presentation Tips – How to Structure a Technical Presentation
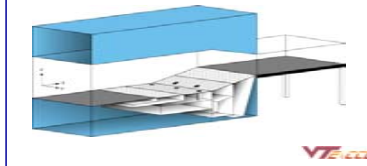
Presentations can be viewed from three stylistic perspectives

Structure and Speech

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Visual Aids

VT

Delivery

Archives, Cal Tech

On the following pages you will find a summary of the most important points which you should bear in mind when preparing your Technical English presentation.
This summary consists of different visuals which illustrate the points made in the text.

On this slide, the presentation consists of three perspectives: the structure and speech of the presentation, the visual aids that one uses, and the delivery of the individual.
While the speech simply consists of the words that the speaker chooses, the structure includes not only the organization of the presentation, but also the depth, the emphasis, and the transitions between the major sections of the talk. The visual aids include presentation slides, transparencies, handouts, video clips etc. Finally, the delivery consists of the speaker's voice, movements (including eye contact), and stage presence before the audience.

Presentation Tips – How to Structure a Technical Presentation

As with documents, the structure of presentations should have clear beginnings, middles, and ends

Beginning
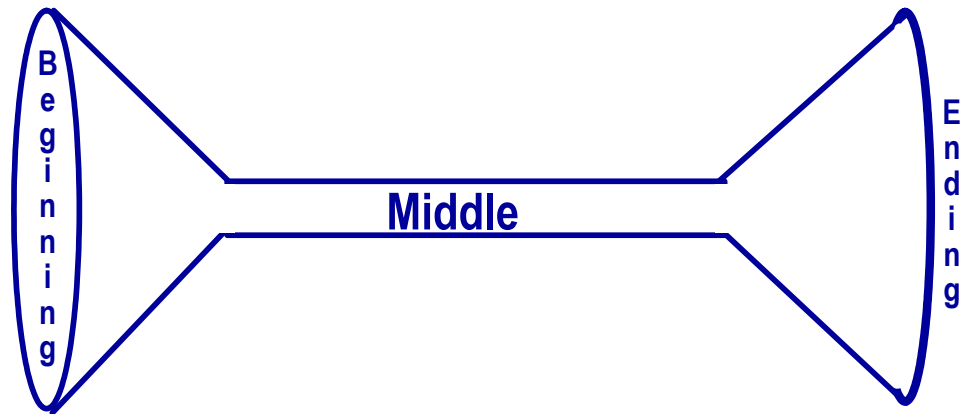
Middle

Ending

This visual depicts the organization of technical presentations. As with documents, all technical presentations should have a clear beginning, middle, and ending. In this picture, an unusual shape is used to show that most successful technical presentations begin with a bigger picture (perhaps a problem in engineering or technology that needs addressing) and then focusing in on the work done. The middle is a discussion and analysis of that work, and the ending comes back to show the ramifications of this work on the big picture.

This image also applies to the concept of targeting an audience. Generally, at the beginning and ending of a technical presentation, you give comments that address everyone in the room. The middle is often more technical, although you may very well try to help those not familiar with the definitions and background information.

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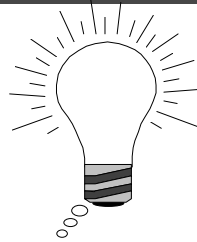**Beginnings prepare the audience
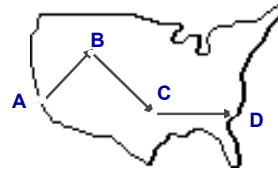for the work to be presented**

Defines work

Shows importance

$$Work = A + B$$

Gives background

Maps presentation

This visual shows the kinds of information that the "Introduction" of a technical presentation typically addresses.

The audience needs to know the topic they are going to hear about and why that topic is important. Then the speaker gives background information which is necessary to understand the subject. Finally, the speaker maps the presentation.

Mapping the presentation is more important in a presentation than in a document because the audience has no idea what direction the speaker is going unless the speaker divulges that information--at least, in a document, the readers can look at the forthcoming headings and subheadings.

Moreover, in a presentation, the audience has to pace themselves--listening is hard work--and if the audience doesn't know where they are, they become tired much more easily.

**The middle presents the work
in a logical order**

pre-combustion methods

combustion
methods

post-combustion
methods
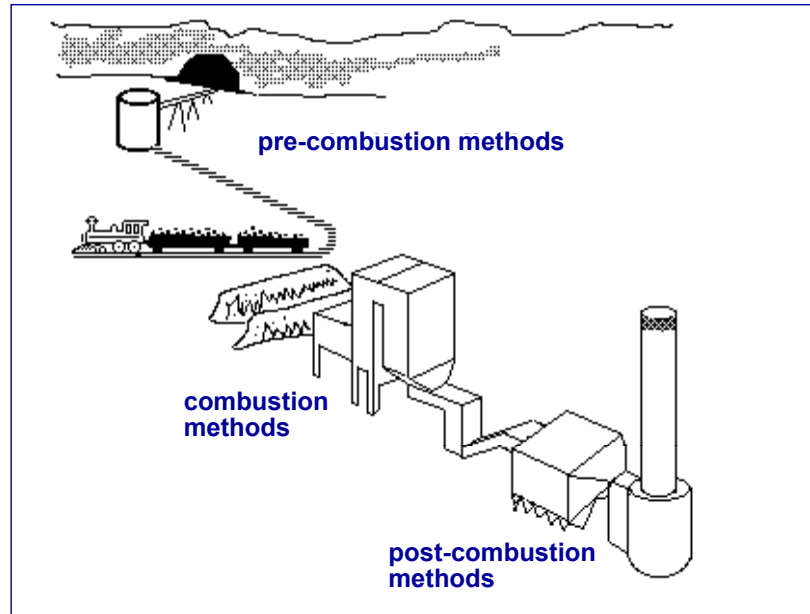
This visual shows how to organize the middle of a technical presentation. The body of the slide shows a common way to organize information: breakdown of the topic into parallel parts. There are certainly other logical organizations: time, position, or cause and effect. Almost all of these come down, though, to dividing the middle of the talk into sections.

The most important points to understand about organizing the middle are that those divisions should be logical and that there should not be too many divisions. For instance, the example presentation reflected in the body of this visual is about five different methods for reducing sulfur dioxide emissions from coal-fired utilities. Rather than confront the audience with all five methods up front (and probably intimidate the audience at that point), the speaker wisely chose to group the methods into three parallel divisions. Groupings of two, three, and four work well in a technical presentation. Groupings of five, six, seven, or more usually intimidate the audience. Moreover, with large numbers of divisions, the audience will probably not remember all the names of the divisions.

Note that the body of this visual was used in a mapping slide for the presentation. While most speakers just give the audience a vertical list (and usually include the names "Introduction" and "Conclusion") for the mapping slide, this speaker placed the list in an image, which is much easier to remember. In regards to the names "Introduction" and "Conclusion," every talk has those sections, and the names are not missed.
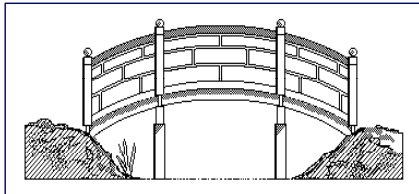
In the middle, you make smooth transitions between major points

pre-combustion methods
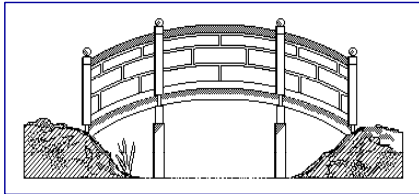
combustion methods

combustion methods

post-combustion methods

Besides finding a logical organization for the topic in presentation's middle, the speaker also should concentrate on making smooth transitions between the divisions of those topics. How does a speaker make a smooth transition? For example by saying *That concludes what I have to say about pre-combustion methods. Now I will discuss combustion methods.* Another way is through delivery: a pause, for example. Yet a third way is through the visuals. By having at least one visual for each major division of the middle, the speaker showing that visual's headline can signal a change in topic. Often good speakers use more than one of these clues that the talk has moved from one section to another.

In addition to transitions between the divisions of the middle, the speaker should clearly make a transition between the presentation's beginning and its middle and between the presentation's middle and its conclusion. The last transition is particularly important. Many students hurry through the ending and in so doing miss one of the best opportunities to emphasize information. When an audience knows that the ending of the presentation is approaching, they often sit up and concentrate (even if they have gotten lost in the technical details of the middle). The speaker should capitalize on that prospect of increased concentration by making sure that the audience knows that the ending has arrived.

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The ending summarizes main points and places those results in the context of the big picture

point 1	point 5
point 2	point 6
point 3	point 7
point 4	point 8

point 1

point 7

Summary

Big Picture

In the ending of a presentation, the speakers want to accomplish two things: give a summary of the most important details and provide a big-picture perspective. Many students have a fear of repeating details. Perhaps they confuse repetition for redundancy (a needless repetition such as "bright green in color").

Repetition is important in technical writing and in technical speaking. After all, on average, people remember only about 10 percent of what they hear. For that reason, at the end of a technical presentation, the speaker should repeat the most important points so that the audience is more likely to walk out the door with those points.

In addition to a summary, the speaker should give a big-picture perspective on the work. In some presentations, that perspective might be a discussion of the work that needs to be done. In yet another presentation that perspective might be a list of recommendations. In another presentation, this perspective is a look at the technical work from the vantage point of the big picture discussed at the beginning of the talk. Each of these perspectives provide closure for the presentation.

Adapted from:http://writing.eng.vt.edu/handbook accessed 2005-01-31