

AUDIOVISUAL PREPARATION GUIDELINES

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Much of the following information was taken from a Technical Attachment written by Jerry Byrum, formerly at the National Weather Service Southern Region Headquarters, Fort Worth, Texas. Additional information was supplied by people in the Satellite Applications Laboratory, NESDIS, and the Air Training Command, Chanute AFB. If you follow these guidelines (or others which have been successfully demonstrated), your presentations at conferences, workshops, and seminars should prove more effective. Although the guidelines presented here key on 35mm slides, similar approaches can be used for vu-graphs, films, videotapes, and other audiovisual systems. If you have suggestions for improving these guidelines, please feel free to share them with the author and others.

Good slides come from good graphics; and good graphics require thought, planning and attention to details. Some of these are described below. By graphic, I mean the drawing, chart, picture, or text, etc., that you wish to make into a slide.

PURPOSE—If you haven't decided what points you want to make in your presentation before your start on audiovisual preparation, you should determine these now. Let your presentation direct the audiovisuals you use, not vice versa.

As meteorologists, it's easy to fall into the trap of following the classical chart selection for a case study weather briefing. Recently, a meteorologist was discussing his upcoming presentation with me. He was going to include 850, 500, and 300 mb charts on a single graphic. When I asked him why he wanted to do this, he replied "to give people a feeling for the upper flow pattern." One more easily seen single graphic (e.g. 500mb level) would have accomplished the same thing.

FORMAT AND SIZE—The format of your graphic is extremely important. It will dictate how your slides will appear on the screen. The standard 35mm slide projects an image with a height/width ratio of 2/3, i.e., a rectangular image that is 50% wider than it is high. If your graphics are not prepared with this ratio in mind, then one or two "bad" things are likely to occur: (1) either the entire figure will not fit on the slide, or (2) what does fit on the slide is either too small or shows too much blank space.

The sample layout page (Fig.1), represents an acceptable size and proper format for most graphics. The content of the slide should be centered in the inner rectangle called the INFORMATION AREA. The space between the inner and outer rectangles should be left to serve as a blank border during photography. You can construct whatever layout page you wish using any desired dimensions as long as they are in a 2/3 ratio.

I'd avoid vertical slides (3/2 height/width ratio) because they present viewing difficulties and are not easily transferable to videotape format. Many times the screen size will

force cutting off either the top or bottom of the slide. When in doubt, think "horizontal." Two horizontal slides are better than one vertical one.

CONTENT—Perhaps the KISS principle is the most important guideline to follow. KEEP IT SIMPLE, SCIENTIST!!! Visual aids are supposed to convey information or answer questions, not create uncertainty about their meaning or interpretation. If you have to explain what your slide means or shows, then it is probably too "busy" or complicated. The most effective slides make use of the full extent of the screen or image area. This does not mean that every possible bit of information should be crammed into a single slide, but rather the projected image shows an appropriate balance between content and blank space. Weather maps, satellite imagery, and radar display information are possible exceptions to this rule (either jointly or in combination). They are frequently the type of figures we use in presentations, and the information content can be very high. Consider the following:

- Put no more in the slide than necessary. If computer-generated graphics are used, consider multiple slides rather than many overlaid fields and data.
- Emphasize what is important by using heavier, coded, and/or colored lines. Use contrasting colors or grey shades.
- Make sure ALL data will be legible when the slide is projected (see following section). Do not just add larger labels to isolines; if plotted data are shown, but cannot be easily read, they will distract the viewer's attention.

LEGIBILITY—Many people mistakenly believe that enlarging the physical dimensions of a projected image improves the legibility at longer viewing distances. Rather than size of IMAGE, it is the size of the DETAIL that is important. The following simple test will help you determine if your graphic will be legible when viewed as a projected slide.

- Measure the height of your graphic.
- Have someone else view the graphic from a distance equal to EIGHT times the height. For example, a 4 inch high graphic should be readable from about 32 inches distant.
- If the graphic is legible from this distance, then it should remain legible when projected and viewed at appropriately larger distances. If it isn't legible, then it should be redrawn with larger or clearer letters, figures, and/or information.

If you want to calculate the approximate MINIMUM size for graphic elements (letters or figures), use the following formula:

$$\text{Minimum Size (in inches)} = (1/50) * \text{height of the graphic}$$

For a graph that is 4 inches high (i.e., the information area in Fig. 1), the letters for curves, labels, points, etc., should be at least $(1/50) * 4 = 2/25$ inches. THIS IS THE ABSOLUTE MINIMUM SIZE. A LARGER SIZE IS RECOMMENDED!

For slides that contain only text, a word processor, computer or typewriter offers some of the simplest and quickest means of producing a legible graphic. However, to avoid cluttering a slide in text and/or equations which are too small

to read, start off with an even smaller information area than shown in Fig. 1. In this way, you force yourself to limit the amount of text. Of course, using a larger or more pleasing size or type of lettering (font) or decreasing the number of characters per inch of type (pitch), will enhance readability, as well. Whenever possible, avoid narratives on a slide; it is better to use "bullets" (as I've done in this brief article) to highlight distinct points. Effective use of coloring could further highlight your message.

