

## Digital show graphics

By Linda Chandler

Learning the lingo of graphic design helps ensure that show managers provide contractors with exactly what they need to get the best results when producing show graphics.

### SIZE VS. RESOLUTION

**Size** means the actual dimensions of the piece. For example, a photo might be three inches by five inches.

**Resolution** refers to the pixels, or dots, per inch required for good reproduction. Most output devices such as printers are geared in dots per inch (dpi). Computer screens and programs are oriented to pixels per inch (ppi). Generally, the higher the resolution, the finer the detail. Most designers request graphics with a certain dpi for the best results.

### PAINTING VS. DRAWING

**Pixel-based painting programs** (bit-map or raster) such as PhotoShop and Painter describe objects in tile-like elements. Reducing an original gives higher resolution, but increasing the size—as is usually required for trade show materials—can cause a blurry, “bit-mapped” effect.

**Vector, or object-oriented, drawing programs** such as Illustrator and Freehand use mathematical expressions to describe shapes, so they can be resized more easily without resolution problems. Most logos are produced in vector programs.

### COLOR LEXICON

**RGB** (red, green and blue) are the colors used to produce images on computer screens.

**CMYK** (cyan, magenta, yellow and black) are the colors of the traditional four-color print process.

**PMS** (Pantone Matching System) is a selection of ink colors produced either as “spot colors” used for logos and branding, or as “process colors” produced using a CMYK four-color print process. Spot colors typically cost more than process colors.

**Tip:** It's more efficient to design in RGB, since monitors operate in RGB. Convert a graphic to CMYK when it's ready to go to press.

### PRODUCTION PET PEEVES

- Any artwork produced in nonstandard programs (Standard acceptable programs are Adobe Photoshop and Illustrator, Quark Xpress, Macromedia Freehand, and CorelDraw.)
- Web graphics submitted for print reproduction
- Late submissions that have problems

### WHY DOESN'T IT LOOK THE SAME?

Wondering why you can't copy a photo from a Web site and use that file in a magazine ad or blow it up for a poster or other display? Computer screens and programs generally operate at 72 ppi. Your desktop printer may print at 300 dpi, and the printing press on which your tabloid, magazine, posters or signage are printed may require yet another resolution. If you copy a Web photo and attempt to enlarge it, the image will be blurry.

The solution? Save an original in a much higher resolution if it's to be enlarged. If your graphics provider prefers 300 dpi for final product resolution and you have a 4-inch transparency that you want to blow up to 36 inches (enlarged by a factor of 9), the original should be submitted at 2,700 dpi. You can also size by length to proportion.

$$\frac{36 \text{ (width of final poster)}}{4 \text{ (width of original art)}} = 9 \times 300 = 2,700 \text{ (dpi scan resolution to submit)}$$

### WHAT CAN THEY DO WITH DIGITAL GRAPHICS? (SEE PHOTOS)

Digital graphics make it easy to alter image size without losing quality. Here are some examples:

For the Windows Server 2003 Conference and Trade Show, The Freeman Companies was able to print this photo directly on the carpet.



The Expo Group was able to create these graphics for the windows at Autodesk's Worldwide One Team Conference at the MGM Grand in Las Vegas.



### GRAPHIC SUBMISSION CHECKLIST

- ✓ Submit files to end producer in the format they prefer and on CD, Zip disk or floppies. (E-mailing is usually unacceptable because graphic files are large and can back up or crash systems.)
- ✓ Check to be sure files are saved at the correct resolution and to CMYK, if required.
- ✓ Check final dimensions and bleeds.
- ✓ Send a color proof or laser proof with color specifications. (Laser proof is usually acceptable for black-and-white, but ask in advance.)
- ✓ Include all fonts used in the file or convert all text fonts to graphics.
- ✓ Send submissions early so there is time to correct any problems.
- ✓ If you have questions, ask them and provide contact information.

### SOURCES

**Susan Bendily**, Corporate Design Director, Freeman Companies, (214) 670-9021

**Dana Doody**, Director of Corporate Communications, The Expo Group, (972) 751-9644

**Chris Hoffman**, Owner, Special FX, (781) 871-9100

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### FILE FORMATS

The type of file preferred depends on what the designer intends to do with the image. An EPS may be best if the image is to be enlarged, while a PDF doesn't allow the designer to change the image in any way.

**EPS** — Most widely accepted vector, or line-based format/extension

**TIF** — Most widely used raster, or image-based format/extension

**GIF** — Format for Internet and Web graphics

**JPG** — Saves file space but compression may alter image-based files, acceptable for archiving

**PDF** — Portable document format, Adobe Acrobat format that allows reading across platforms