

UMDNJ-IST/AST Graphics Production Guide [07.01.06]

This document provides general tips for producing documents and graphics for print and electronic distribution. It is a summary of issues that you may encounter in preparing files for use in the Digital Media Store, UMDNJ web sites, WebCT courses, and general graphics projects.

1. Page Layout Programs

- 1.1. Page layout programs are used to create single and multi-page layouts for professional and desktop printing.
- 1.2. Professional page layout programs including Adobe In-Design and Quark Express produce files that can be printed by commercial printers accurately and reliably.
- 1.3. Word Processors (i.e.: Microsoft Word) and Consumer level design programs (i.e.: Publisher) and Presentation Software (i.e.: Power Point) can create attractive layouts that print satisfactorily from desktop printers but may not be usable by commercial printers.

2. Still Images

2.1. Vector Graphics vs. Bitmapped Graphics

- 2.1.1. There are two main types of graphics files, vector and bitmapped.
- 2.1.2. *Bitmap formats* are best for images with a lot of variation and detail
 - such as digital photographs.
 - 2.1.2.1. **Caveat** when using bitmap images: when you magnify or rotate a bitmap image you will often get a blurry image and see jagged edges around text, logos, fine lines and similar elements.
 - 2.1.2.2. Bitmapped images are made of many dots of color called *Pixels*
 - 2.1.2.3. The *resolution* of an image indicates the density of information and detail in a bitmap image (how many pixels fit in an area).
 - 2.1.2.4. The *file size* of a bitmap file depends on the number of pixels in the image.
 - 2.1.2.5. *Adobe Photoshop* is the most common bit-map image editing software but there are many others
- 2.1.3. *Vector formats* are better for high-contrast hard-edged graphics like logos, technical illustrations, charts and diagrams because they are not made of pixels.
 - 2.1.3.1.1. Vector graphics are *resolution independent* and can typically be re-sized, rotated or otherwise manipulated without any loss of quality.
 - 2.1.3.1.2. Vector Graphic Software and File Formats
 - 2.1.3.1.2.1. Adobe illustrator is by far the most common professional vector illustration program. It can save files as native illustrator (AI), Encapsulated Post-Script (EPS) or Portable Document Files (PDF). Macromedia Flash artwork is also vector based.

2.2. Print Images

- 2.2.1. Images for print should be scaled to 300 dpi (dots per inch) *at the size they will be printed*
 - 2.2.1.1. A 300 dpi image placed in your layout at 200% original size, is effectively only 150 dpi
- 2.2.2. Options for print images color are: 1)CMYK, 2)Greyscale or 3) Black and White
- 2.2.3. Bit-map files print options:
 - If using Quark Xpress = EPS files
 - If using Adobe InDesign = Photoshop files
- 2.2.4. Vector files options:
 - If using Quark Xpress = EPS files
 - If using Adobe InDesign = either Illustrator or PDF files

2.3. Web images

- 2.3.1. Images for use on the web or in power point slides should be 72 dpi
- 2.3.2. JPG images for the web can be RGB color files or Greyscale
- 2.3.3. GIF images for the web have a limited pallet of 256 colors or less

2.4. Cropping and scaling images for placement

- 2.4.1. Check the *exact* dimensions of the space that your images needs to fill in your web page (in pixels) or print layout (usually in inches)
- 2.4.2. Scale your *actual image file* so that it is the correct *size* and *resolution* for your publication (always save an original for other uses)
- 2.4.3. Bit map images can only be scaled up (magnified) about 120% before they deteriorate
- 2.4.4. Rotate your image and crop to the available space if necessary
- 2.4.5. If you place an image that does not fit correctly within the graphics field of a Web Page or Digital Media Store template, the image will be stretched and distorted to fit!

2.5. Exporting your graphics file to PDF for use with the Digital Media Store

- 2.5.1. Use the *Job Express print driver* to convert your documents to PDF for use with the Digital Media Store
- 2.5.2. The *Job Express print driver* can be downloaded from the DMS catalog page
- 2.5.3. The *Job Express print driver* is pre-set to properly produce a PDF for print output. Using other conversion methods may not produce ideal results.