

IMAGE ACQUISITION & PREP

**Basics of image preparation for
print design and production**

3 BASIC KINDS OF “ART”

- Reflective
- Transparency
- Digital

KINDS OF “SCANNERS”

- Flatbed
- Slide/film
- Drum
- Digital camera

ISSUES

- *Kind of original*
 - *reflective*
 - *transparency*
- *Dimensions of original*
 - *will it fit*
- *Quality of hardware*
 - *resolution*
 - *optics & light*
 - *software*
- *Difficulty of operating hardware/software*

3 BASIC IMAGE “MODES”

- Line Art
- Grey Scale
- Color
 - RGB
 - CYMK

FILE SIZE 7" x 5" IMAGE 300 DPI

400k

3mb

9mb

12mb

ISSUES

Pay attention to the file size in relationship to mode needed.

File size increases with amount of color information.

7" x 5" IMAGE RGB MODE

72 dpi

100 dpi

200 dpi

300 dpi

400 dpi

500 dpi

600 dpi

FILE SIZE

500 k

1 mb

4 mb

9 mb

16 mb

25 mb

36 mb

ISSUES

Pay attention to the file size in relationship to resolution needed.

Higher dpi means larger file size.

RGB MODE 300 DPI

3.5" x 2.5"

7" x 5"

14" x 10"

FILE SIZE

2.25 mb

9 mb

36 mb

ISSUES

Pay attention to the file size in relationship to dimensions needed.

Larger dimensions means larger file size.

CONTRIBUTORS

- Mode
 - Line Art
 - Grey Scale
 - Color
 - RGB
 - CYMK
- Resolution (dpi)
- Dimensions

ISSUES

- *File Size Issues*
 - *storage/archive*
 - *file transport*
 - *file upload*
 - *open/save times*
 - *copy times*
 - *print times*

BASIC IMAGE FILE FORMATS

RASTER

- TIFF
- EPS
- PSD
- PNG
- JPEG
- GIF

VECTOR

- PDF
- AI
- EPS

ISSUES

- *Compatibility with use (print/web/etc.) and software applications*
- *Cross-platform*
- *Compression lossless vs lossy*
- *Distribution size for email or upload*

NEED TO KNOW — USE OF IMAGE

How is image being used, reproduced, or distributed?

PRINT

What is the “quality” of the product?

What kind of paper

Halftone line screen

65-85

newspaper

-newspaper

- newsprint

-newsletter

- uncoated

85-100

“newsletter”

-magazine or book

- coated

100-150

magazine or book

NEED TO KNOW — LAYOUT OF IMAGE

Scale of the image - how large is the image in your layout ?

In InDesign check effective resolution in the Links Palette

SIMPLE EQUATION

2x line screen @ 100% final scale = desired rez

2x 133 lpi (screen) @ 100% final scale = 266dpi desired rez

LONG EQUATION

$\text{lpi} \times 2 = \frac{\quad}{\text{of image}} \times \text{final width} = \frac{\quad}{\text{of image}} \div \text{original width} = \text{desired rez}$

GARBAGE IN — GARBAGE OUT

- Focus
- Color balance/saturation
- Exposure
 - too light - washed out
 - too dark
 - too much contrast - highlight blown out
- Scratches/dust/other defects?
- Interfering elements - power lines, etc.
- How is it cropped?

Can fix most of these in Photoshop

LINKED OR EMBEDDED?

LINKED IMAGES

- Manage a low rez placeholder or “FPO” then replace with high rez originals during file output
 - low rez is used for placement, scale, cropping
 - high rez is used for color correction and retouching
 - keeps document (InDesign) file size smaller
 - need to provide all images during output
 - update links if original is altered

LINKED OR EMBEDDED?

EMBEDDED IMAGES

- Place then embed images
 - use for placement, scale, cropping
 - replace if color correction and retouching are done to original
 - document (InDesign) file size increases
 - don't need to provide images during output

PERFORM PRELIMINARY IMAGE MANIPULATIONS IN IMAGE EDITING PROGRAM (other than minor alterations)

- Scale
- Cropping
- Rotation

- Color & Contrast

- Resolution — down rez if needed
of course you can't effectively "up rez"