

Posterizations and Halftones

Copy

- ⌘ Line - type, line art, large dots
- ⌘ Continuous tone
 - ☒ Photographs
 - ☒ Chalk drawings
 - ☒ Pencil sketch
 - ☒ Water color, black and white
- ⌘ Color
 - ☒ Photos, paintings, transparencies

Continuous tone

- ⌘ Reproduce continuous tone?
- ⌘ Converted to halftone
 - ☒ Various dot sizes - print only solid color
 - ☒ Optical illusion
- ⌘ Continuous
 - ☒ White, shades of gray, black

Posterization p. 303

- ⌘ Tones
 - ☒ Black and white - 2 tones
 - ☒ Black, white, gray - three tones
- ⌘ Computer posterizations
 - ☒ Photoshop

Terms used with printing photographs

- ⌘ Pixel - smallest picture element
- ⌘ PPI - pixels per inch
Measure of monitor, digital camera, or scanner resolution
- ⌘ Samples or dots



DPI - dots per inch

- ☒ Measure of the resolution of output device
 - ☒ Laser printer - 600 dpi
 - ☒ Imagesetter - 2400 dpi
- ☒ Multiple dots to create larger halftone dots



LPI - lines per inch

- ⌘ Measure of the screen ruling of printed halftones
 - ☒ Dots per linear inch
 - ☒ Different from computer generated
 - ☒ Screen ruling dots composed of many laser dots
 - ☒ Examples
 - 65-85 - coarse, newspapers
 - 133 - better
 - 175-200 - high quality, good press

Halftone Creation

- ⌘ Traditional
 - ☒ Process camera/contact screen
 - ☒ Screen broke the photo into dots
- ⌘ Digital - direct computer input
 - ☒ Scanning
 - ☒ Photo CD
 - ☒ Digital camera

Evaluating originals for halftone reproduction

- ⌘ Original Photo
 - ☒ Light - highlights
 - ☒ Gray - mid tones
 - ☒ Black - shadows
- ⌘ Density
 - ☒ Degree of blackness
 - ☒ 0.0 white to 4.0 black
 - ☒ Black and white photo - 0.0 - 2.0
 - ☒ Color - > 2.0

Densitometer - used to measure density

- ⌘ Reflection
- ⌘ Transmission

Relationships P. 209

- ⌘ Output quality dependent on relationship between output (dpi) and screen ruling (lpi)
- ⌘ Images are bitmapped
 - ☒ $4 \times 4 = 16$ possible squares and 16 possible combinations of dots or shades of gray
 - ☒ $16 \times 16 = 256$ possible squares or shades of gray