Image Resolution Cheat Sheet

Common terms:

PPI, commonly confused with DPI, PPI stands for **Pixels Per Inch** and is used when referring to images on the screen, for scanning, and in digital cameras. The term incidates the pixel density within an image. The higher the PPI, the higher the quality of the output image.

DPI, commonly confused with PPI, stands for **Dots Per Inch** and is used in printing. The term refers to the density of dots of inks sprayed on a page, which can be further broken down into the differing angles each is sprayed at (look at the COLOR lecture in Resources). The higher the DPI, the more continuous the image tone appears to be. This is resolution dependent, which is why it is so difficult to have effects in Illustrator (that are vector based) consistently show up when printing.

LPI, or **Lines Per Inch**, is a measure of printing resolution. The term lines per inch refers to how close the lines of a halftone grid are and is determined by the printing device being used.

Common resolutions to know:

For the web and other on-screen graphics: 72 PPI – 96 PPI
For newspapers: 150 PPI – 300 PPI
For magazines & other printed publications: 200 PPI – 600 PPI
High quality photographs range from 720 – 2800 PPI

Printer capability, type and paper quality will all affect the way the resolution of an image and the image appearance.

Scanning:

Building a file that will display properly starts with the original input (scanning, photographing, …). While pixel based images can be made smaller, going larger will cause the images to break down with the space between pixels getting filled with garbage information and making pixilation evident.

Scanning is an inverse proportion between size and resolution. What does that mean? That when the size of an image goes up, the resolution will go down (think of stretching a rubber band, the farther it is stretched the thinner it gets in the middle).

So, if you want to increase the size of an image to double or triple it's original size, you need to scan the original at double or triple your final output resolution.

Example:

4"x6" image needs to be 12"x18" @ 300DPI for a poster.

The original image is 1/3 the final size, so it will need to be scanned at 3 times the final output resolution or 900 PPI

original

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final
12"x18"
300 PPI

4"x6"
900 PPI