

why does it look good on screen and bad in print?

A PRIMER ON PHOTO RESOLUTION AND PHOTO QUALITY

Are you gathering photographs to use in your upcoming publication? Many people assume incorrectly that if the image looks okay on their computer monitor, they can use it in a print project, even if the image comes from the Web. However, if the resolution isn't high enough, that photo will look terrible in print. Here's a primer on why.

what does resolution mean?

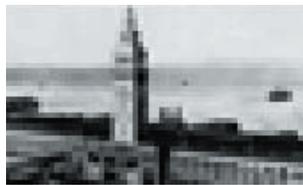
Digital photos are made up of many small dots, called pixels. Resolution refers to how many of these dots there are per square inch in a digital file, which ultimately affects how sharp a photo appears. Lots of dots per inch (dpi) means the dots are so tiny that they blend into a smooth and professional image. Few dots per inch means you'll be able to see the dots easily, so your photo will look jagged and rough.

what dpi do I need?

Photos in most print publications usually have a resolution of 300 dpi. This means the file is likely to be over 1MB in size, depending on the actual dimensions, how it's saved and whether it's color or black and white. A file under 100K should be viewed with suspicion. If it's that small, it almost certainly doesn't contain enough information to print a quality image.



300 dpi



72 dpi

Also, be aware that although it is acceptable to reduce the dimensions of a 300 dpi photo, enlarging one more than 115% will compromise the quality. Why? Because when you enlarge an image you're stretching the available pixels into a bigger space, thus lowering the resolution.

pixel vs. vector?

If you don't work as a professional designer, you're probably only familiar with images made up of pixels (usually JPEG, TIFF or BMP files). But there is another kind of file which is used for drawing illustrations on the computer. Called vector files, these images are stored as a series of mathematical equations based on points that create a path. They are infinitely scaleable, which is why most professional logos are created using vector files. The file extension is usually EPS.

FAQ



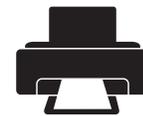
CAN I DOWNLOAD PHOTOS FROM THE WEB?

Because the size of a file determines how quickly it downloads, webmasters save images at low resolution so that pages will load quickly. A typical photo on a Web site is saved at 72 dpi. This is fine for on-screen viewing, because monitors don't display at high resolution anyway. But it's far too low for print purposes.



WHAT ABOUT DIGITAL CAMERA PHOTOS?

That depends on your camera. Low-end digital cameras often don't create high-resolution files. If you're unsure, set your camera to the highest setting (the one that allows you to fit the fewest photos on your memory card) and send a test shot to your designer. It's a great idea to do this before you document an important event, or you may find you've preserved it in a form that only a monitor will love.



BUT WHY DOES A LOW-RESOLUTION PHOTO PRINT OKAY ON MY OWN PRINTER?

A low-resolution photo printed on a low-resolution printer won't look too bad—just like it looks okay on screen. But take that photo to an offset press for professional printing and you're going to see every pixel.