Pixels Made Easy: Why Size Matters

Here are some examples of how pixels relate to image size - both in kilobytes and inches - and quality.

	pixels	inches
width	183	2.5
height	278	3.9

resolution	72ppi (pixels per inch)
file size	28k
load time	5 seconds

This is the original and is compressed at the "maximum" level of "10."

	pixels	inches
width	242	3.361
height	368	5.111

resolution	72ppi (pixels per inch)
file size	37k
load time	7 seconds

This version is no different than the original except it has been resized in the Image > Image Size dialogue box by doubling the amount of pixels. This automatically doubled the print size (inches) and increased the file size as well.

Notice, however, the resolution (pixels per inch) has not decreased. Simply put, all I did was "blow up" the picture so it appears bigger on the screen. Since it takes up more pixels on the screen, it appears larger. Just as you would increase the size in inches for a printed publication, you increase the size in pixels for on screen use.

It is also compressed at the maximum level of "10."

	pixels	inches
width	242	3.361
height	368	5.111

resolution	72ppi (pixels per inch)
file size	14k
load time	3 seconds

This is the above picture compressed at a “low” level of “2.” Since this image is a JPEG, despite being compressed at a level of “2” or “Low” any visual quality degradation from the original is almost completely indiscernible. If you look closely, you’ll see his bulging veins and the paisley in his tie blend together. For most photographs, I believe this is an acceptable sacrifice since bulging veins and paisley aren’t the most attractive things in the world anyway.

The file size and the load time are cut over 50%. For this photo, a decrease in quality only really becomes obvious at a setting of “1” or “0.”

	pixels	inches
width	366	2.5
height	556	3.9

resolution	144ppi (pixels per inch)
file size	19k
load time	3 seconds

This is the original with the resolution doubled. It is compressed at a “low” level of “2.”

It would print the same size as the original but since your monitor has a fixed # of pixels, it appears much larger on screen because the number of pixels has doubled.

It is possible to increase the resolution without affecting the actual image size, but this example illustrates what could be considered on screen “side effects.”

	pixels	inches
width	92	2.5
height	139	3.9

resolution	36ppi (pixels per inch)
file size	10k
load time	2 seconds

This is the original with the resolution decreased by half. It is compressed at a “low” level of “2.”

It would print the same size as the original but since your monitor has a fixed # of pixels, it would appear much smaller on screen because the number of pixels has decreased.

It is possible to increase the resolution without affecting the actual image size, but this example illustrates what could be considered on screen “side effects.”