
Subject: Re: Pixels per Inch

Posted by [JD Smith](#) on Mon, 15 Dec 2003 21:46:17 GMT

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On Mon, 15 Dec 2003 13:20:08 -0700, Craig Markwardt wrote:

> JD Smith <jdsmith@as.arizona.edu> writes: [...]

>> It depends on how many "inches" you intend to output the image to. This
>> is a basic and common mis-understanding of how image resolution works.
>> A bitmap image like a PNG file has a specific size in pixels, nxm say,
>> but does not have an associated "physical size". The

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> JD, I'm not sure that's always true. I believe that TIFF images have an
> inherent (desired) dot pitch. Perhaps other formats do too, but PNGs
> definitely do not, so your comment is appropriate for the original
> poster.

Actually, PNG also has an optional header chunk called "pHYs" which gives the pixels per meter. Other image formats have something similar. My main point was that, no matter what you put in the header regarding the "physical size" of the image, this is only a suggestion, and has no bearing on the resolution or detail present in your image. Many programs explicitly ignore these data (especially for on-screen display). You have to separate the notion of resolution as "convenient suggestions for printing and print layout programs" vs. resolution as real physical detail present in the image.

The program pngcrush can add, change or remove the pHYs resolution information from PNG files (<http://pmt.sourceforge.net/pngcrush>). But, for example, if I take a PNG file and give it resolution 300dpi, 50dpi, and no resolution, the three version display exactly the same in all browsers, and the Gimp.

JD
