

Capture Resolution

notes

Digital imaging is the capture of visual images in electronic format for presentation, reproduction, transmission, or storage.

Images can be captured by several different types of equipment:

- Digital cameras are the most common, with a variety of capabilities to capture and store images
- Flatbed scanners are widely available to digitize prints and flat artwork
- Slide scanners are more specialized for converting 35mm slides and negatives

Digital images are composed of individual spots of color – pixels – arranged in a grid. The number of pixels in an image determines its resolution, or the ability to show fine detail.

About Film Resolution

Traditional 35mm slide film has a resolution equivalent to an 8-10 megapixel image, depending on the size of the film grain.

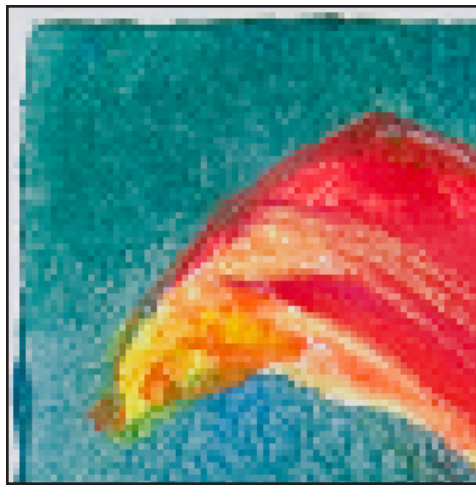
Capture resolution often is measured in megapixels, where one megapixel is equal to one million pixels. An image that is 3,000 pixels wide by 2,000 pixels high is six megapixels in size (the width times the height).

In a low resolution image, the individual pixels are readily seen and the detail is obscured.

With more pixels, the fine detail becomes visible and the image appears sharper. Images captured with more pixels can also be reproduced to larger sizes.

Importantly, the resolution is fixed once an image is captured. You cannot add resolution later. As a result, you should plan to have enough resolution in your images for the planned uses.

But, having more pixels in the image increases the size of the file. A larger file uses more computer storage and takes longer to e-mail or upload. So don't capture more resolution than you expect to need, or your image files will be unnecessarily large.



Low Resolution Image

Resolution also is affected by the size and quality of the sensor and lens, and by the mechanical and signal processing components in the camera or scanner.

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