

Electronic File Formats



As more and more of our courts and agencies begin to use digital formats to maintain their records, I thought that it would be good to update you on the differences in file formats for maintaining those images. What format you use should largely be driven by the purposes for which the information is used and maintained. (Note: much of this information is taken or paraphrased from information offered in the following website).

<http://ei.cs.vt.edu/~netinfo/backups1604/graphicformats.html> .

FILE FORMATS (TIFF/JPEG, etc.)

Most formats use some kind of compression technique to try and overcome the large storage size image files require. These techniques can be categorized into "lossless" or "lossy" formats. Lossless formats use routines to compress all of the original data and are thus able to recreate the image without loss of data, hence the name. Lossy formats discard some data during compression. While data maintained in "lossy" formats is usually not discernable to the naked eye, there is a difference and could cause legal problems. Here is the key on "lossy" formats. Lossy formats save space/bandwidth but at a cost. Most "lossy" formats are for use in photographs and photo exchanges thus loss of information is of secondary importance to these formats and the people that use them. Legal acceptability, however, is another matter and "lossless" should be the requirement. The most frequently used lossy format is JPEG. The most frequently used lossless are TIFF and PDF.

"JPEG is a standard created by the Joint Photographics Experts Group. It utilizes compression techniques that are specifically designed for photographic images. It takes advantage of limitations in the human vision system to achieve high rates of compression. JPEG is a lossy format which allows a user to set the desired level of quality maintained in the image. Higher qualities requires more storage but is only needed for particular images. Allowing users to control the quality/compression decision is a superb advantage of JPEG since it utilizes a person's innate vision processing, their knowledge of the application of an image and their knowledge of the available memory of the particular storage system. "

TIFF - "The Tagged Image File Format (TIFF), provides a mechanism for storing many different types of images (e.g., monochrome, grayscale, 8-bit & 24-bit RGB, etc.). TIFF tags the type of data in the file that describes the image type. The latest revisions to the specification provides tags for compression formats, but this is not supported by many programs that implement TIFF. TIFF is a lossless format (when not utilizing the new JPEG tag which allows for JPEG compression). The TIFF format was developed by the Aldus Corp. in the 1980's and later supported by the Microsoft Corp."

(Note: PDFs are created from TIFFs).