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TIFF Technical Notes

1. The StripByteCounts field should always be included when writing TIFF files. When reading TIFF files, however, you are likely to encounter some TIFF files that do not use the StripByteCounts tag. When reading these files, if the file contains only one strip per image then the size of the strip can be determined by computing the number of bytes per row and multiplying the result by the value of the ImageLength tag.

2. Always limit your strips to a reasonable size, regardless of the number of strips to be written. We recommend limiting strips to 32 Kilobytes each or less. Some programs that read TIFF files will not be able to read a single strip that is 2 Megabytes! Further, the TIFF specification provides a good mechanism to divide images into strips of reasonable size so that they can be read a portion at a time. Using this TIFF feature when writing files allows the greatest flexibility of software and memory configurations when reading them.

3. If any information is given explicitly in a TIFF file, that information should be used when reading the file rather than any default or expected value. Do not assume any information unless the information is not present in the file and the specification states an assumption or default.

4. Every TIFF file should have a SubfileType tag, even if it contains only one image and the image is full resolution. Although the specification does not state explicitly that a SubfileType tag is required, it does state that there is no default subfile type. Do not require applications that read your TIFF files to assume a subfile type in the absence of a valid default.

5. RowsPerStrip and StripOffsets were specified as type LONG in an earlier version of the TIFF specification. In the current specification (4.0) they may now be either LONG or SHORT. Some software built according to the earlier specification may not expect type SHORT for these tags so we recommend, when creating a TIFF file, to write these as type LONG. It is also important to not assume a type for either of these tags when reading a TIFF file.

6. The PlanarConfiguration tag is unnecessary if the value of the SamplesPerPixel tag is 1, even though the TIFF specification does not list a default for PlanarConfiguration. The different types of PlanarConfiguration are equivalent for images with only one sample per pixel (at least through revision 4.0 of the TIFF specification). Consequently, applications that read TIFF files should not produce an error when reading a file with no PlanarConfiguration tag and SamplesPerPixel equal to 1. If the samples per pixel is greater than 1, however, then the image data cannot be interpreted without knowing the planar configuration and this tag should be required.