# **Introduction to the TIFF Documentation**

The following definitions are used throughout this documentation. They are consistent with the terminology used in the TIFF 6.0 specification.

*Sample* The unit of information stored in an image; often called a channel elsewhere. Sample values are numbers, usually unsigned integers, but possibly in some other format if the SampleFormat tag is specified in a TIFF *Pixel* A collection of one or more samples that go together. *Row* An Nx1 rectangular collection of pixels. *Tile* An NxM rectangular organization of data (or pixels). *Strip* A tile whose width is the full image width. *Compression* A scheme by which pixel or sample data are stored in an encoded form, specifically with the intent of reducing the storage cost. *Codec* Software that implements the decoding and encoding algorithms of a compression scheme.

In order to better understand how TIFF works (and consequently this software) it is important to recognize the distinction between the physical organization of image data as it is stored in a TIFF and how the data is interpreted and manipulated as pixels in an image. TIFF supports a wide variety of storage and data compression schemes that can be used to optimize retrieval time and/or minimize storage space. These on-disk formats are independent of the image characteristics; it is the responsibility of the TIFF reader to process the on-disk storage into an in-memory format suitable for an application. Furthermore, it is the responsibility of the application to properly interpret the visual characteristics of the image data. TIFF defines a framework for specifying the on-disk storage format and image characteristics with few restrictions. This permits significant complexity that can be daunting. Good applications that handle TIFF work by handling as wide a range of storage formats as possible, while constraining the acceptable image characteristics to those that make sense for the application.

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