



Tech Info Library

TIFF (Tag Image File Format): Specifications (1 of 7)

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Introduction

This memorandum has been prepared jointly by Aldus and Microsoft in conjunction with leading scanner and printer manufacturers. This document does not represent a commitment on the part of either Microsoft or Aldus to provide support for this file format in any application. When responding to specific issues raised in this memo, or when requesting additional tag or field assignments, please address your correspondence to either:

Tim Davenport
Aldus Corporation
411 First Ave. South
Suite 200
Seattle, WA 98104

Manny Vellon
Windows Marketing Group
Microsoft Corporation
16011 NE 36th Way
Box 97017
Redmond, WA 98073-9717

Revision Notes

This release of the TIFF specification has been given a Revision number. It is really the fourth major revision, so the Revision number was set to 4.0.

Abstract

This document describes TIFF, a tag based file format that is designed to promote the interchange of digital image data.

The fields were defined primarily with desktop publishing and related applications in mind, although it is conceivable that other sorts of imaging applications may find TIFF to be useful.

The general scenario for which TIFF was invented assumes that applications software for scanning or painting creates a TIFF file, which can then be read and incorporated into a "document" or "publication" by an application such as a desktop publishing package.

The intent of TIFF is to organize and codify existing practice with respect to the definition and usage of "desktop" digital data, not to blaze new paths or promote unproven techniques. Yet a very high priority has been given to structuring the data in such a way as to minimize the pain of future additions. TIFF was designed to be a very extensible interchange format.

TIFF is not a printer language or page description language, nor is it intended to be a general document interchange standard. It may be useful as is for some image editing applications, but is probably inappropriate for -- and would thus need to be translated into some intermediate data structures by -- other image editing applications. The primary design goal was to provide a rich environment within which the exchange of image data between application programs can be accomplished. This richness is required in order to take advantage of the varying capabilities of scanners and similar devices. TIFF is therefore designed to be a superset of existing image file formats for "desktop" scanners (and paint programs and anything else that produces images with pixels in them) and will be enhanced on a continuing basis as new capabilities arise.

Although TIFF is claimed to be in some sense a rich format, it can easily be used for simple scanners and applications as well, since the application developer need only be concerned with the capabilities that he requires. The mechanisms for accomplishing this goal are discussed in the next section.

TIFF is intended to be independent of specific operating systems, filing systems, compilers, and processors. The only significant assumption is that the storage medium supports something like a "file," defined as a sequence of 8-bit bytes, where the bytes are numbered from 0 to N. The largest possible TIFF file is 2**32 bytes. Since pointers (byte offsets) are used liberally, a TIFF file is most easily read from a random access device,

although it is possible to read and write TIFF files on sequential media such as magnetic tape.

The recommended MS-DOS file extension for TIFF files is ".TIF". The recommended Macintosh filetype is "TIFF". Conventions in other computing environments have not yet been established.

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