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

This article last reviewed: 12 February 1988

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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:

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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.

Keywords: specsht

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19960215 11:05:19.00

Tech Info Library Article Number: 2660