

TIFF TAG CONVERSION TO IPP

TIFF Specific

The following TIFF Tags are used exclusively for the definition of TIFF formats and will have no function if TIFF encoding is not used. All Tags in this group can be eliminated.

- 273 StripOffsets*
- 278 RowsPerStrip*
- 279 StripByteCounts*
- 330 SubIFD* (Used only with the M profile)
- 400 GlobalParametersIFD*
- 404 VersionYear* (Used only with the C, L, and M profiles)
- 405 ModeNumber* (Used only with the M profile)
- 559 StripRowCounts* (Used only with the M profile)

Compression Methods

The current IPP attribute *compression* and *compression-supported* can include the following new values:

- mh-with-eols* Modified Huffman compressed graphics with End of Line terminators.
- mr-with-eols* Modified READ compressed graphics with End of Line terminators.
- mmr* Modified Modified READ compressed graphics.
- jpeg* Joint Photographic Experts Group lossy compressed graphics.
- jbig-bw* JBIG graphics encoding for black and white. (T.82 encoding using T.85.)
- jbig-color* JBIG graphics encoding for color and gray scale. (T.82 encoding using T.43.)
- mh-without-eols* ISSUE: Is this needed?
- mr-without-eols* ISSUE: Is this needed?

The IPP compression attributes would replace the following TIFF Tags:

- 259 Compression*
- 292 T4Options* (Used only with the F and M profiles)
- 293 T6Options* (Used only with the F and M profiles)
- 403 CodingMethods*
- 435 T82Options* (Used only with the J and M profiles)

Note: If we support MRC, it is possible to have multiple encoding types in a file, a new attribute *compressions* will have to be defined that is "multi-valued".

An alternative would be a different attribute name, *graphics-encoding* for this feature. This may be more representative of these values, since they are more than a compression method.

A second alternative is to define a new *compression* attribute value *mixed*.

In all cases it would be the responsibility of the data file format to define the proper encoding values at the appropriate points in the data stream.

UIF Profiles

The existing IPP FAX unique attributes of *uif-profiles*, *uif-profile-requested*, *uif-profile-capabilities*, and *uif-profiles-supported* provide the functionality of the following TIFF Tags:

- 254 NewSubfileType*
- 402 FaxProfile*
- 34687 TIFF-FXExtensions*
- 34688 MultiProfiles*

Image Orientation

Rather than overload the existing IPP *orientation* attributes, a new attribute *graphics-orientation* is proposed to provide the functionality of the TIFF Tag:

274 Orientation

This attribute would support the keyword values:

**row-top-column-left, row-top-column-right, row-bottom-column-left,
row-bottom-column-right, column-top-row-left, column-top-row-right,
column-bottom-row-left, column-bottom-row-right**

This new attribute can be used in conjunction with the current *orientation* attribute to define the position of the image on the page.

ISSUE: Do we need to define attributes *graphics-orientation-supported* and *graphics-orientation-default* or simply require that printers support all values of the *graphics-orientation* attribute?

ISSUE: Can any of the above values be removed? Internet Fax only requires two.

Graphics Control Parameters

These TIFF Tags could be implemented as new IPP attributes. This would certainly add 19 new attributes.

256 ImageWidth

257 ImageLength

258 BitsPerSample

262 PhotometricInterpretation

266 FillOrder

277 SamplesPerPixel

282 XResolution

283 YResolution

ISSUE: Do we need to support non-square resolutions?

286 XPosition (Used only with the M profile)

287 YPosition (Used only with the M profile)

296 ResolutionUnit

297 PageNumber

346 Indexed (Used only with the L and M profiles)

347 JPEGTables (Used only with the C and M profiles)

433 Decode (Used only with the C, L, and M profiles)

434 ImageBaseColor (Used only with the M profile)

530 ChromaSubSampling (Used only with the C and M profiles)

531 ChromaPositioning (Used only with the M profile)

34732 ImageLayer (Used only with the M profile)

Information Parameters

The following TIFF Tags merely provide some descriptive information about the data file. This information could be eliminated or included as IPP attributes.

269 DocumentName

270 ImageDescription

305 Software

306 DateTime