

Exiv2 - Feature #756

Access to ICC Profile (TAG: 0x8773) data in Exif as uninterpreted binary

04 Feb 2011 15:05 - Ray NA

Status:	Closed	Start date:	04 Feb 2011
Priority:	Normal	Due date:	
Assignee:	Robin Mills	% Done:	100%
Category:	metadata	Estimated time:	0.00 hour
Target version:	0.26		
Description			
Reference to: http://dev.exiv2.org/boards/3/topics/794			
Embedded ICC profiles (TIFF TAG: 0x8773) can be found in the IFD0 (see attached Nikon NEF) or in JPEG APP2 areas.			
Request for access to the embedded raw data; Exiv2 i/f needs only provide access - interpretation will do done elsewhere by SampleICC API for example.			
Attachments:			
1x Nikon NEF (processed by Nikon Capture NX2 2.2.5) 1x exiftool decode of NEF, showing ICC in IFD0			
1x JPEG, generated from Nikon NEF using Capture NX2 2.2.5 1x exiftool decode of jpeg, showing ICC in JPEG APP2			
Related issues:			
Related to Exiv2 - Patch #676: Patch for reading ICC color profiles		Closed	26 Jan 2010
Related to Exiv2 - Feature #1074: ICC Profile in APP2 segment.		Closed	07 May 2015

History

#1 - 31 Aug 2011 05:34 - Andreas Huggel

- Target version deleted (0.22)

#2 - 24 Jul 2013 16:07 - Robin Mills

- Category set to metadata

- Status changed from New to Assigned

- Target version set to 0.25

Deferred to 0.25.

#3 - 26 Apr 2015 20:00 - Robin Mills

This looks like an easy one now that we have -pS to dump structure and -pX option to dump XMP. I could easily add -pl to say extract ICC profile.

```
$ exiv2 -pS ~/Downloads/DSC-IFD0_ICCprofile.jpg
STRUCTURE OF JPEG FILE: /Users/rmills/Downloads/DSC-IFD0_ICCprofile.jpg
address | marker | length | data
  2 | 0xd8 SOI |
  4 | 0xe0 APP0 | 16 | JFIF.....,.,.,.
 22 | 0xe1 APP1 | 39577 | Exif..II*.....
39601 | 0xe2 APP2 | 8700 | ICC_PROFILE.....!NKON. ..mnr
48303 | 0xdb DQT | 132
48437 | 0xc4 DHT | 232
48671 | 0xc0 SOF0 | 17
48690 | 0xda SOS | 12

$ exiv2 -pS ~/Downloads/DSC-IFD0_ICCprofile.NEF
STRUCTURE OF TIFF FILE: /Users/rmills/Downloads/DSC-IFD0_ICCprofile.NEF
address | tag | type | count | offset | value
  10 | 0x00fe NewSubfileType | LONG | 1 | 1 | 1
  22 | 0x0100 ImageWidth | LONG | 1 | 320 | 320
  34 | 0x0101 ImageLength | LONG | 1 | 212 | 212
  46 | 0x0102 BitsPerSample | SHORT | 3 | 314 |
```

```

58 | 0x0103 Compression | SHORT | 1 | 1 | 1
70 | 0x0106 PhotometricInterpret | SHORT | 1 | 2 | 2
82 | 0x010f Make | ASCII | 18 | 320 | NIKON CORPORATION.
94 | 0x0110 Model | ASCII | 10 | 338 | NIKON D40.
106 | 0x0111 StripOffsets | LONG | 1 | 44800 | 44800
118 | 0x0112 Orientation | SHORT | 1 | 1 | 1
130 | 0x0115 SamplesPerPixel | SHORT | 1 | 3 | 3
142 | 0x0116 RowsPerStrip | LONG | 1 | 212 | 212
154 | 0x0117 StripByteCounts | LONG | 1 | 203520 | 6912
166 | 0x011a XResolution | RATIONAL | 1 | 348 |
178 | 0x011b YResolution | RATIONAL | 1 | 356 |
190 | 0x011c PlanarConfiguration | SHORT | 1 | 1 | 1
202 | 0x0128 ResolutionUnit | SHORT | 1 | 2 | 2
214 | 0x0131 Software | ASCII | 19 | 364 | Capture NX 2.2.5 W.
226 | 0x0132 DateTime | ASCII | 20 | 384 | 2011:02:04 22:48:55.
238 | 0x014a SubIFDs | LONG | 2 | 404 |
250 | 0x0214 ReferenceBlackWhite | RATIONAL | 6 | 412 |
262 | 0x8769 ExifTag | LONG | 1 | 9164 | 9164
274 | 0x8773 InterColorProfile | UNDEFINED | 8684 | 460 |
286 | 0x9003 DateTimeOriginal | ASCII | 20 | 9144 | 2011:02:04 22:46:11.
298 | 0x9216 TIFFEPStandardID | BYTE | 4 | 1 | I*..

```

\$

On the other hand, I'm wondering if this is our concern. A color profile isn't really metadata. Once we have a feature to extract the profile, somebody will ask us to be able to insert it. Or even worse, to be able to edit the data within the profile. We are really adding a fourth type of metadata. So we will be supporting Exif, Iptc, Xmp and now Icc.

It's possible to write a little script to read the output of `exiv2 -pS` and extract the profile with `dd`. There's an example of extracting XMP with `dd` in this document: http://dev.exiv2.org/projects/exiv2/wiki/The_Metadata_in_TIFF_files

I feel we should set this to Resolved and decline to implement this.

#4 - 02 Jun 2015 23:07 - Alan Pater

- Target version changed from 0.25 to 0.26

#5 - 21 Aug 2015 16:47 - Robin Mills

- Status changed from Assigned to Closed

- Assignee changed from Andreas Huggel to Robin Mills

I'm going to close this issue. However it remains linked to [#1074](#) which is active. The test files provided here will be useful when [#1074](#) is implemented.

#6 - 22 Aug 2015 16:14 - Robin Mills

- % Done changed from 0 to 100

Files

DSC-IFD0_ICCprofile.NEF	7.73 MB	04 Feb 2011	Ray NA
nef.txt	71.8 KB	04 Feb 2011	Ray NA
DSC-IFD0_ICCprofile.jpg	1.55 MB	04 Feb 2011	Ray NA
jpg.txt	39.2 KB	04 Feb 2011	Ray NA