

Exiv2 - Bug #1286

Unable to extract ICC profile from Leica Image

05 Apr 2017 18:25 - Robin Mills

Status:	Closed	Start date:	05 Apr 2017
Priority:	Normal	Due date:	
Assignee:	Robin Mills	% Done:	100%
Category:	jpeg parser	Estimated time:	2.00 hours
Target version:	0.26		
Description			
639 rmills@rmillssmbp:~/gnu/exiv2/trunk \$ exiv2 -eC ~/Downloads/leica_q_typ_116_01.jpg Exiv2 exception in extract action for file /Users/rmills/Downloads/leica_q_typ_116_01.jpg: Not a valid ICC Profile			
640 rmills@rmillssmbp:~/gnu/exiv2/trunk \$			

Associated revisions

Revision 4752 - 05 Apr 2017 18:36 - Robin Mills

#1286 Fix submitted.

Revision 4753 - 06 Apr 2017 05:25 - Robin Mills

#1286 Correction to r4752

History

#1 - 05 Apr 2017 18:29 - Robin Mills

- File *leica_q_typ_116_01.jpg* added

- File *dmpf.cpp* added

```
619 rmills@rmillssmbp:~/gnu/exiv2/trunk $ exiv2 -pS ~/Downloads/leica_q_typ_116_01.jpg
STRUCTURE OF JPEG FILE: /Users/rmills/Downloads/leica_q_typ_116_01.jpg
address | marker      | length | data
-----+-----+-----+-----
    0 | 0xffd8 SOI  |         |
    2 | 0xffe1 APP1  | 48508 | Exif..II*.....
48512 | 0xffe2 APP2  | 3200 | ICC_PROFILE.....HLino....mnrRG chunk 1/1
51714 | 0xffdb DQT   | 132  |
51848 | 0xffc0 SOF0  | 17   |
51867 | 0xffc4 DHT   | 418  |
52287 | 0xffdd DRI   | 4    |
52293 | 0xffda SOS   |         |
```

```
620 rmills@rmillssmbp:~/gnu/exiv2/trunk $ dd bs=1 count=$((3200-16)) skip=$((48512+16)) if=~/Downloads/leica_q_typ_116_01.jpg > foo.icc
3184+0 records in
3184+0 records out
```

```
3184 bytes (3.2 kB) copied, 0.011329 s, 281 kB/s
```

```
621 rmills@rmillssmbp:~/gnu/exiv2/trunk $ dmpf foo.icc | head -1
0      0: .....HLino....mn -> 01 01 00 00 0c H L i n o 02 10 00 00 m n
```

```
622 rmills@rmillssmbp:~/gnu/exiv2/trunk $
```

dmpf is my home made dump utility (od on steroids, code is attached).

The 'Lino' string makes me think 'Linotype' as the makers of the profile. Here's an Adobe profile in our test suite:

```
630 rmills@rmillssmbp:~/gnu/exiv2/trunk $ dmpf test/data/small.icc | head -1
0      0: ...0ADBE....mnr -> 00 00 02 0 A D B E 02 10 00 00 m n t r
631 rmills@rmillssmbp:~/gnu/exiv2/trunk $
```

Conclusion: There are two '0x01' bytes in the Leica image that look suspicious. If we ignore them, we have the big endian length as 0x00 00 0c 48 = 3144. Getting excited:

```
637 rmills@rmillssmbp:~/gnu/exiv2/trunk $ dd bs=1 count=$((3200-16)) skip=$((48512+18)) if=~/Downloads/leica_q_typ_116_01.jpg > foo.icc
3184+0 records in
```

```
3184+0 records out
3184 bytes (3.2 kB) copied, 0.0118 s, 270 kB/s
638 rmills@rmillsmbp:~/gnu/exiv2/trunk $ iccDumpProfile foo.icc
Profile:      'foo.icc'
Profile ID:   Profile ID not calculated.
Size:        3144(0xc48) bytes
```

Header

```
Attributes:   Reflective | Glossy
Cmm:          Unknown 'Lino' = 4C696E6F
Creation Date: 2/9/1998 06:49:00
```

....

```
      greenTRCTag 'gTRC'      1084      2060
      blueTRCTag 'bTRC'      1084      2060
```

```
639 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

#2 - 05 Apr 2017 18:38 - Robin Mills

Fix submitted. [r4752](#)

The profile in the leica test file is padded. The JPEG has allocated 3200 bytes, however the "real" profile length is 3144 bytes. The first four bytes of a profile are the length of the profile encoded as big-endian. Those four bytes give us the correct size of the profile.

#3 - 24 Apr 2017 08:15 - Robin Mills

- Status changed from Assigned to Closed

Files

leica_q_typ_116_01.jpg	11.4 MB	05 Apr 2017	Robin Mills
dmpf.cpp	1.46 KB	05 Apr 2017	Robin Mills