

Exiv2 - Bug #1126

Extracting Exif from PNG in Exiv2-0.25

08 Oct 2015 12:58 - Mikayel Egibyan

Status:	Closed	Start date:	08 Oct 2015
Priority:	Normal	Due date:	
Assignee:	Robin Mills	% Done:	100%
Category:	metadata	Estimated time:	2.00 hours
Target version:	0.26		
Description			
I can't import PNG metadata using 0.25 version of Exiv2. The reason I think it's a bug (pardon me if I am wrong) is that the same code worked with 0.24 version.			
Thanks, Mikayel			
Related issues:			
Related to Exiv2 - Feature #1074: ICC Profile in APP2 segment.		Closed	07 May 2015

Associated revisions

Revision 4501 - 16 Sep 2016 05:33 - Robin Mills

#1126 Fixes submitted for msvc2003

History

#1 - 08 Oct 2015 15:19 - Robin Mills

- Status changed from New to Assigned

- Priority changed from Urgent to Normal

Mikayel

Do you have a test PNG image?

I am very surprised by your report because I can't think of any changes to pngimage.cpp for v0.25 that could have caused this.

Are you sure that you have libz linked to your code? You need libz for PNG support. Run this command:

```
514 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 --verbose --version --grep libz
exiv2 0.25 001900 (64 bit build)
library=/usr/local/lib/libz.1.dylib
library=/usr/lib/libz.1.dylib
have_libz=0
515 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

I ran this the Mac, the output will be a little different on Windows or Linux. However you can see libz shared object/dll in memory.

Windows:

```
C:\cygwin64\home\rmills\gnu\exiv2\trunk\msvc2005\bin\win32\releasedll>exiv2 --verbose --version --grep zlib --
grep libz
exiv2 0.25 001900 (32 bit build)
library=C:\cygwin64\home\rmills\gnu\exiv2\trunk\msvc2005\bin\win32\releasedll\zlib1.dll
have_libz=1
```

```
C:\cygwin64\home\rmills\gnu\exiv2\trunk\msvc2005\bin\win32\releasedll>
```

Linux:

```
1004 rmills@rmillssmm-kubuntu:~/gnu/exiv2/trunk $ exiv2 --verbose --version --grep libz --grep zlib --grep lib
exiv2 0.25 001900 (64 bit build)
library=/usr/local/lib/libz.so.1
have_libz=1
1005 rmills@rmillssmm-kubuntu:~/gnu/exiv2/trunk $
```

You will always report have_libz= either 0 or 1. However you'll only report the library=path-to-library when your building exiv2 to use DLLs or shared

objects. If you statically link, the DLL/shared object will not be loaded at run-time. However, you will have LIBZ and therefore PNG support.

Incidentally, I see --verbose --version is incorrectly reporting have_libz=0. I've logged that as [#1127](#) fixed it [r3978](#) and [r3980](#). It's reporting correctly now, as you can see on the Windows and Linux output which was built after I submitted [r3978](#).

#2 - 08 Oct 2015 16:17 - Mikayel Egibyan

I have zlib1.dll and zlib1.lib but I don't know what libz is?

Mikayel

#3 - 08 Oct 2015 16:18 - Mikayel Egibyan

- File 1796916_10155735224985483_5543419639968711499_o.png added

Please find attached an example of PNG image.

#4 - 08 Oct 2015 16:34 - Mikayel Egibyan

Online Exif extractors find data in the image (e.g. <http://exifdata.com/exif.php>)

#5 - 08 Oct 2015 16:43 - Alan Pater

- Category changed from exif to metadata

The test file appears to include only IPTC and ICC metadata, not EXIF.

exiv2 can read the IPTC metadata but not the ICC (Colour Profile) metadata.

#6 - 08 Oct 2015 17:19 - Robin Mills

zlib1.dll on Windows is the same thing as libz.so.1 on Linux and libz.1.dylib on Mac. Very inconsistent names. However that's how it is.

exiftool is reporting lots of metadata - however I don't believe it is Exif data (I discuss this later). exiv2 v0.22, v0.24 and trunk (v0.25) says "No Exif data found in the file".

I'm not sure there is a case to answer here, Mikayel. You'll have to find more solid evidence that we've changed something.

Exiv2 v0.22

```
571 rmills@rmillsmbp:~/gnu/exiv2/0.22 $ exiv2 -V ; exiv2 ../0.24/1796916_10155735224985483_5543419639968711499_o.png
exiv2 0.22 001600 (64 bit build)
Copyright (C) 2004-2011 Andreas Huggel.
```

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```
File name      : ../0.24/1796916_10155735224985483_5543419639968711499_o.png
File size     : 110831 Bytes
MIME type     : image/png
Image size    : 91 x 720
../0.24/1796916_10155735224985483_5543419639968711499_o.png: No Exif data found in the file
```

Exiv2 v0.24

```
572 rmills@rmillsmbp:~/gnu/exiv2/0.22 $ cd ../0.24
573 rmills@rmillsmbp:~/gnu/exiv2/0.24 $ sudo make install >/dev/null
574 rmills@rmillsmbp:~/gnu/exiv2/0.24 $ exiv2 -V ; exiv2 ../0.24/1796916_10155735224985483_5543419639968711499_o.png
exiv2 0.24 001800 (64 bit build)
Copyright (C) 2004-2013 Andreas Huggel.
```

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```
File name      : ../0.24/1796916_10155735224985483_5543419639968711499_o.png
File size     : 110831 Bytes
MIME type    : image/png
Image size   : 91 x 720
```

../0.24/1796916_10155735224985483_5543419639968711499_o.png: No Exif data found in the file

Trunk (v0.25)

```
575 rmills@rmillsmbp:~/gnu/exiv2/0.24 $ cd ../trunk/
576 rmills@rmillsmbp:~/gnu/exiv2/trunk $ sudo make install >/dev/null
577 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -V ; exiv2 ../0.24/1796916_10155735224985483_5543419639968711499_o.png
exiv2 0.25 001900 (64 bit build)
Copyright (C) 2004-2015 Andreas Huggel.
```

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```
File name      : ../0.24/1796916_10155735224985483_5543419639968711499_o.png
File size     : 110831 Bytes
MIME type    : image/png
Image size   : 91 x 720
```

../0.24/1796916_10155735224985483_5543419639968711499_o.png: No Exif data found in the file

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

I think exiftool is mostly report ICC profile data.

exiftool:

```
578 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiftool ../0.24/1796916_10155735224985483_5543419639968711499_o.png
ExifTool Version Number      : 10.02
File Name                    : 1796916_10155735224985483_5543419639968711499_o.png
Directory                   : ../0.24
File Size                    : 108 kB
File Modification Date/Time  : 2015:10:08 17:35:55+01:00
File Access Date/Time       : 2015:10:08 17:49:13+01:00
File Inode Change Date/Time  : 2015:10:08 17:43:36+01:00
File Permissions             : rw-r--r--
File Type                    : PNG
File Type Extension         : png
MIME Type                    : image/png
Image Width                  : 91
Image Height                 : 720
Bit Depth                    : 8
Color Type                   : RGB
Compression                  : Deflate/Inflate
Filter                       : Adaptive
Interlace                    : Noninterlaced
Original Transmission Reference : mM-aKMqieBxJiF2_i2Q5
Profile Name                  : icm
```

```

Profile CMM Type      : lcms
Profile Version      : 2.1.0
Profile Class        : Display Device Profile
Color Space Data     : RGB
Profile Connection Space : XYZ
Profile Date Time    : 2012:01:25 03:41:57
Profile File Signature : acsp
Primary Platform     : Apple Computer Inc.
CMM Flags            : Not Embedded, Independent
Device Manufacturer  :
Device Model         :
Device Attributes    : Reflective, Glossy, Positive, Color
Rendering Intent     : Perceptual
Connection Space Illuminant : 0.9642 1 0.82491
Profile Creator      : lcms
Profile ID           : 0
Profile Description   : c2
Profile Copyright    : FB
Media White Point    : 0.9642 1 0.82491
Media Black Point    : 0.01205 0.0125 0.01031
Red Matrix Column    : 0.43607 0.22249 0.01392
Green Matrix Column  : 0.38515 0.71687 0.09708
Blue Matrix Column   : 0.14307 0.06061 0.7141
Red Tone Reproduction Curve : (Binary data 64 bytes, use -b option to extract)
Green Tone Reproduction Curve : (Binary data 64 bytes, use -b option to extract)
Blue Tone Reproduction Curve : (Binary data 64 bytes, use -b option to extract)
Image Size          : 91x720
Megapixels          : 0.066
579 rmills@rmillsmbp:~/gnu/exiv2/trunk $

```

Dumping the structure of the PNG shows:

```
581 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -pS ../0.24/1796916_10155735224985483_5543419639968711499_o.png
```

```
STRUCTURE OF PNG FILE: ../0.24/1796916_10155735224985483_5543419639968711499_o.png
```

address	index	chunk_type	length	data
8	0	IHDR	13	
33	1	zTXt	100	Raw profile type iptc..x.=...0.
145	2	iCCP	276	icm..(c`..I.-f.`..+).rwR...R`
433	3	IDAT	8192	x^..w.^Gy7.....^7.vWZu...{.;c
8637	4	IDAT	8192	...gF.....O ./7...B\m.,;..
16841	5	IDAT	8192hoY@.L..4.[...Q.%>.&
25045	6	IDAT	8192	..a.(.....l.=...K.N.z...AB.P
33249	7	IDAT	8192\r&.O.S.....D.V...+.;.
41453	8	IDAT	8192	..<'Y,%.....Wi.....iRJ. ..A{.>
49657	9	IDAT	8192	O.<..v..].a[s.{ ([...rY
57861	10	IDAT	8192	.,.....o^'....}...Z@.!)%W.
66065	11	IDAT	8192	p\$Ja...k..{.Z\$.lnnfB.....;...;j
74269	12	IDAT	8192)....._yJP.....[".\$
82473	13	IDAT	81927.^\....=w.....h..P@.e...
90677	14	IDAT	8192	.,...."S8.....s.....H..T..`
98881	15	IDAT	8192	...o...^.....+..Ri.....D).<..
107085	16	IDAT	3722	.i.<`.....3m...,.=.....,!.Y;c
110819	17	IEND	0	

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

As you can see there's an IPTC 'profile'. I think the ICM data may be a colour profile. One of the projects for v0.26 is to extract/replace ICC profiles. [#1074](#) At the moment, I've done this for JPG and haven't found a suitable test file for PNG. Thanks for this file, this will be very useful.

#7 - 09 Oct 2015 18:00 - Robin Mills

- Status changed from Assigned to Resolved
- Target version set to 0.26
- % Done changed from 0 to 100
- Estimated time set to 2.00 h

I'm going to mark this 100% resolved. Mikayel, if you find reproducible evidence, please add it to this issue report and it will be investigated.

#8 - 06 Dec 2015 21:09 - Robin Mills

- Status changed from Resolved to Closed

Files

bug.jpg	35.3 KB	08 Oct 2015	Mikayel Egibyan
1796916_10155735224985483_5543419639968711499_o.png	108 KB	08 Oct 2015	Mikayel Egibyan