Exiv2 v0.26 RC-One

C++ metadata library

Robin & Alison's Garden

Photo: 2016-10-15 England

- ## New Team Members:

- Ben (Canada)

- Raphael (France and USA)

- Sridhar (India)

- Troy (USA)

- **Maybe**:

  - Thomas (Germany)

  - Raphael (France)

  - Alan (Peru)

- **Apology**:

  - Niels (Denmark)

- *No reply yet:*

  - Sridhar (India)

  - Gilles (France)

  - Andreas (Malaysia)

Team Discussion: 2016-10-23

Version: 2016-10-17

- 1 User Support

- 2 Issue Back-log and Bug Fixes

- 3 CMake Support

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Team Discussion: 2016-10-23

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- 500 hours of work (10 hours/week)

- Regular updates to project status page: http://dev.exiv2.org/news/2

- Typical Response time is less than 24 hours

- Most new issues are closed within 7 days

- Test Suite is updated when issues are resolved

- Supporting Users AND Developing Features is very stressful

- Investigating User's Questions is very insightful

Team Discussion: 2016-10-23

- 200+ Issues closed for v0.26

- About 30 were 5+ years old

- We have about 25 v1.0 feature requests

- We have about 50 issues for v0.27

- 100 New Issues Reported and Closed in 12 months

Team Discussion: 2016-10-23

Version: 2016-10-17

- I strongly dislike CMake on Windows

- CMake/Visual Studio is wrapped by a 400 line batch file

- I use CMake on Mac/Xcode for development

- Daily build is performed by CMake (except MinGW)

- CMake/MinGW is in-complete with v0.26

Team Discussion: 2016-10-23

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4 Build Server

- http://exiv2.dyndns.org:8080/ or https://exiv2.dyndns.org:8443

- Builds/tests on commit.

- Builds/tests daily for 16 platforms
  Mac/Linux/Cygwin/MinGW
  MSVC 2005/8/10/12/13/15 32bit and 64bit builds

- Daily Build Artefacts are published (and retested)

Team Discussion: 2016-10-23
Version: 2016-10-17

```
1221 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -pS test/data/Reagan.jpg
STRUCTURE OF JPEG FILE: test/data/Reagan.jpg
 address | marker      |  length | data
       0 | 0xffd8 SOI
       2 | 0xffe1 APP1  |    5718 | Exif..MM.*......................
    5722 | 0xffed APP13 |    3038 | Photoshop 3.0.8BIM..........Z...
    8762 | 0xffe1 APP1  |    5329 | http://ns.adobe.com/xap/1.0/.<?x
   14093 | 0xffe2 APP2  |     576 | ICC_PROFILE......0ADBE....mntrRG chunk 1/1
   14671 | 0xffee APP14 |      14 | Adobe.d@......
   14687 | 0xffdb DQT   |     132
...
   15266 | 0xffda SOS
1222 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

```
1222 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -pR test/data/Reagan.jpg
STRUCTURE OF JPEG FILE: test/data/Reagan.jpg
 address | marker      | length | data
       0 | 0xffd8 SOI
       2 | 0xffe1 APP1 |   5718 | Exif..MM.*.....................
  STRUCTURE OF TIFF FILE (MM): MemIo
   address |     tag                        |    type |    count |    offset | value
        10 | 0x0100 ImageWidth              |   SHORT |        1 | 13107200 | 200
        22 | 0x0101 ImageLength             |   SHORT |        1 |  8519680 | 130
        34 | 0x0102 BitsPerSample           |   SHORT |        4 |      242 | 8 8 8 8
...
       214 | 0x8769 ExifTag                 |    LONG |        1 |      792 | 792
    STRUCTURE OF TIFF FILE (MM): MemIo
     address |     tag                      |    type |    count |    offset | value
         794 | 0x829a ExposureTime          | RATIONAL |       1 |     1254 | 1254/0
...
    END MemIo
       226 | 0x8825 GPSTag                  |    LONG |        1 |     1400 | 1400
      1422 | 0x0103 Compression             |   SHORT |        1 |   393216 | 6
      1434 | 0x011a XResolution             | RATIONAL |       1 |     1498 | 1498/0
      1446 | 0x011b YResolution             | RATIONAL |       1 |     1506 | 1506/0
      1458 | 0x0128 ResolutionUnit          |   SHORT |        1 |   131072 | 2
      1470 | 0x0201 JPEGInterchangeFormat    |    LONG |        1 |     1514 | 1514
      1482 | 0x0202 JPEGInterchangeFormatLeng |   LONG |        1 |     4196 | 4196
  END MemIo
    5722 | 0xffed APP13 |   3038 | Photoshop 3.0.8BIM..........Z...
  Record | DataSet | Name               | Length | Data
       1 |      90 | CharacterSet       |      3 | .%G
...
       2 |      25 | Keywords           |      8 | underway
    8762 | 0xffe1 APP1 |   5329 | http://ns.adobe.com/xap/1.0/.<?x
   14093 | 0xffe2 APP2 |    576 | ICC_PROFILE......0ADBE....mntrRG chunk 1/1
...
   15266 | 0xffda SOS
1223 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

6 ICC Profile Support

```
1224 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -pS test/data/Reagan.jpg
STRUCTURE OF JPEG FILE: test/data/Reagan.jpg
 address | marker       |  length | data
       0 | 0xffd8 SOI
       2 | 0xffe1 APP1  |    5718 | Exif..MM.*......................
    5722 | 0xffed APP13 |    3038 | Photoshop 3.0.8BIM.........Z...
    8762 | 0xffe1 APP1  |    5329 | http://ns.adobe.com/xap/1.0/.<?x
   14093 | 0xffe2 APP2  |     576 | ICC_PROFILE......0ADBE....mntrRG chunk 1/1
   14671 | 0xffee APP14 |      14 | Adobe.d@......
   14687 | 0xffdb DQT   |     132
   14821 | 0xffc0 SOF0  |      17
   14840 | 0xffdd DRI   |       4
   14846 | 0xffc4 DHT   |     418
   15266 | 0xffda SOS
1225 rmills@rmillsmbp:~/gnu/exiv2/trunk $ exiv2 -eC --verbose --force test/data/Reagan.jpg
File 1/1: test/data/Reagan.jpg
Writing iccProfile: test/data/Reagan.icc
1226 rmills@rmillsmbp:~/gnu/exiv2/trunk $ ls -alt test/data/Reagan.icc
-rw-r--r--+ 1 rmills staff 560 Oct 17 10:19 test/data/Reagan.icc
1227 rmills@rmillsmbp:~/gnu/exiv2/trunk $ iccDumpProfile test/data/Reagan.icc | tail -3
        redColorantTag   'rXYZ'      500         20
      greenColorantTag   'gXYZ'      520         20
       blueColorantTag   'bXYZ'      540         20
1228 rmills@rmillsmbp:~/gnu/exiv2/trunk $
```

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```
trunk $ ls -alt test/data/large.icc
-rw-r--r--+ 1 rmills staff 1613600 Sep 15 15:15 test/data/large.icc
trunk/ $ cp test/data/Reagan.jpg .
trunk/ $ cat test/data/large.icc | exiv2 -iC- Reagan.jpg
trunk/ $ exiv2 -eC- Reagan.jpg | wc
    4027    82066 1613600
trunk/ $
```

- You can pipe using the insert and extract commands:
  exiv2 -eC- foo.image | exiv2 -iC- another image

- Target modifier **-** is **stdin on insert** and **stdout on extract**

- Types of data to pipe are **e i a x C XX X**

Team Discussion: 2016-10-23

```
trunk/ $ exiv2 -pv --grep lens/i http://clanmills.com/files/DSC_0002.NEF
0x0083 Nikon3        LensType              Byte       1  14
0x0084 Nikon3        Lens                  Rational   4  180/10 2500/10 35/10 63/10
0x008b Nikon3        LensFStops            Undefined  4  64 1 12 0
0x000c NikonLd3      LensIDNumber          Byte       1  146
0x000d NikonLd3      LensFStops            Byte       1  64
trunk/ $ cat ~/.exiv2
[canon]
247=Samyang 14mm f/2.8 AE ED AS IF UMC
[nikon]
146=Robin's Sigma Lens

[pentax]
# 3 255 0 0=another pentax lens

[minolta]
# 255=a sony lens

[olympus]
# 123=something
trunk/ $ exiv2 -pa --grep lens/i http://clanmills.com/files/DSC_0002.NEF
Exif.Nikon3.LensType              Byte       1  D G VR
Exif.Nikon3.Lens                  Rational   4  18-250mm F3.5-6.3
Exif.Nikon3.LensFStops            Undefined  4  5.33333
Exif.NikonLd3.LensIDNumber        Byte       1  Robin's Sigma Lens
Exif.NikonLd3.LensFStops          Byte       1  F5.3
trunk/ $
```

Team Discussion: 2016-10-23

- Web site makeover (Andreas)

- New Logo

- Exiv2 man page enhancements

- Ascii Art in ReadMe files

```
 ▪  @@@@@@@@@@@@b                      ;mm                    /##Gilles###\
    j@@@#Robin",                       Brad                   /@@@Thomas@@@@Q
     @@@#        \                      ##                    @@@b     |@@@b
     @@@#             .;;;;,    ,;;;;, ,;;;; ,;;;P     .;;;    7@@      ]Alan
     @@@#             j@@@@,   ]@@#/  '@@@# j@@@#      ]@@^           ;@@@"
     @@@Andreas@C     "@@@p @@@"     @@@b  j@@@p     @@b          @@@#/
     @@@#^7"7%#\      ^@@@@@#~      Benb   1@@@     {@#          s@@@#
     @@@#             Niels        @@@b    @@@Q ]@#         ;@@@#/
     @@@#            ,@@##@@m      @@@b    @@@p @@C        #@@#C
     @@@#      ,/   s@@# @@@@      @@@b     Volker       @Tuan@
    ]@@@Abhinav@@\  /@@@\   \@@@Q @@@Q      %@@@#      /@@@@Mahesh@@#
    /@@@@@@@@@@@@@\ /@@@@@\    C++ Metadata   Library   /@Sridhar@@@v0.26\
```

10 Image Format Enhancements

- WebP (Ben)

- JPEG2000 Enhancements

- -pR printStructure(kpsRecursive) for many image types

- -pS printStructure(kpsBasic) for more image types than v0.25

- ICC Support for TIFF, PNG, JPEG, WEBP, JPEG2000 and PGF

Team Discussion: 2016-10-23
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11 XMP Enhancements

- XMP Specification November 2014 updates (Alan)

- CRS and CRSS XMP namespace and properties (Alan)

- Target XX for "Raw XMP" extract/insert

- Target x for "internal XMP" extract/insert

Team Discussion: 2016-10-23

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12 What's Next ?

- I hope we will ship v0.26 in 2016

- Please play and report bugs

- 8 week trip to Australia and New Zealand over Christmas

- Robin will visit Andreas in December 2016

- Robin will retire from Exiv2 at the end of 2017

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