

Exiv2 - Feature #1076

Detect raw image size in Fuji RAF

10 May 2015 13:02 - Max Pozdeev

Status: New	Start date: 10 May 2015
Priority: Normal	Due date:
Assignee:	% Done: 0%
Category: image format	Estimated time: 0.00 hour
Target version: 1.0	
Description The raw image size of sample image (reported by exiftool): Raw Image Width : 4952 Raw Image Height : 3288 Raw Image Full Width : 5120 Raw Image Full Height : 3288 Exiv2 has no such info, it shows 1920 x 1280 as image size. Sample file - https://www.dropbox.com/s/9mily5394y7c6aj/fujifilm_x_pro1_14.raw?dl=0	
Related issues: Related to Exiv2 - Feature #992: Better raw file support and test Assigned 18 Sep 2014	

History

#1 - 10 May 2015 16:50 - Alan Pater

- File *exiftool.v.output* added
- Category set to *image format*
- Target version set to *0.26*

Tested and confirmed with build from trunk. exiv2 cannot read that data from the image.

The related output from exiftool is:

JPEG SOS

```
PreviewImage = SCALAR(0x21e9710)
+ [Fuji directory with 10 entries]
| 0) RawImageFullSize = 3288 5120
| 1) FujiFilm_RAF_0x0110 = 786460
| 2) FujiFilm_RAF_0x0111 = 213914400
| 3) FujiFilm_RAF_0x0112 = 320867520
| 4) FujiFilm_RAF_0x0113 = 213914400
| 5) FujiLayout = 12 12 12 12
| 6) FujiFilm_RAF_0x0131 = SCALAR(0x2523db0)
| 7) FujiFilm_RAF_0x0141 = 786468
| 8) FujiFilm_RAF_0x9650 = 4290248804
| 9) RAFData (SubDirectory) -->
| + [BinaryData directory, 58648 bytes]
| | RawImageWidth = 4952
| | RawImageHeight = 3288
+ [FujiIFD directory with 1 entries]
| 0) FujiIFD (SubDirectory) -->
| + [FujiIFD directory with 16 entries]
| | 0) RawImageFullWidth = 5120
| | 1) RawImageFullHeight = 3288
| | 2) BitsPerSample = 12
| | 3) FujiFilm_IFD_0xf004 = 4
| | 4) FujiFilm_IFD_0xf005 = 1920
| | 5) FujiFilm_IFD_0xf006 = 0
| | 6) StripOffsets = 2048
| | 7) StripByteCounts = 25251840
| | 8) FujiFilm_IFD_0xf009 = 142
| | 9) FujiFilm_IFD_0xf00a = 255 255 255 255 255 255 255 255 255 255 255 255 255 255[snip]
| | 10) FujiFilm_IFD_0xf00b = 267.4545455 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 0 0[snip]
| | 11) WB_GRBLevelsStandard = 302 355 810 17 302 644 451 21
| | 12) WB_GRBLevelsDaylight = 302 541 512
```

```
| | 13) WB_GRBLevels = 302 541 512
| | 14) FujiFilm_IFD_0xf00f = 294.2 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 0.00011 0.0[snip]
| | 15) FujiFilm_IFD_0xf010 = 267.4545455 0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 100[snip]
```

#2 - 25 Nov 2015 19:47 - Robin Mills

- Status changed from New to Resolved

- Assignee set to Robin Mills

- % Done changed from 0 to 100

- Estimated time set to 1.00 h

Looks as though somebody has fixed this.

```
509 rmills@rmillsmbp:~/clanmills $ exiv2 -pa ~/Downloads/fujifilm_x_prol_14.raf
Exif.Image.Make                Ascii          9  FUJIFILM
Exif.Image.Model               Ascii          7  X-Pro1
Exif.Image.Orientation         Short          1  top, left
Exif.Image.XResolution        Rational       1  72
Exif.Image.YResolution        Rational       1  72
Exif.Image.ResolutionUnit     Short          1  inch
Exif.Image.Software           Ascii         30  Digital Camera X-Pro1 Ver1.00
Exif.Image.DateTime           Ascii         20  2012:03:06 11:05:59
Exif.Image.YCbCrPositioning   Short          1  Co-sited
Exif.Image.Copyright          Ascii          5
Exif.Image.ExifTag            Long           1  354
Exif.Photo.ExposureTime       Rational       1  1/3800 s
Exif.Photo.FNumber            Rational       1  F2
Exif.Photo.ExposureProgram    Short          1  Aperture priority
Exif.Photo.ISOSpeedRatings    Short          1  200
Exif.Photo.SensitivityType    Short          1  1
Exif.Photo.ExifVersion        Undefined      4  2.30
Exif.Photo.DateTimeOriginal   Ascii         20  2012:03:06 11:05:59
Exif.Photo.DateTimeDigitized  Ascii         20  2012:03:06 11:05:59
Exif.Photo.ComponentsConfiguration Undefined      4  YCbCr
Exif.Photo.CompressedBitsPerPixel Rational       1  2
Exif.Photo.ShutterSpeedValue  SRational     1  1/3822 s
Exif.Photo.ApertureValue      Rational       1  F2
Exif.Photo.BrightnessValue    SRational     1  8.73
Exif.Photo.ExposureBiasValue  SRational     1  0 EV
Exif.Photo.MaxApertureValue   Rational       1  F1.6
Exif.Photo.MeteringMode       Short          1  Multi-segment
Exif.Photo.LightSource        Short          1  Unknown
Exif.Photo.Flash              Short          1  No, compulsory
Exif.Photo.FocalLength        Rational       1  35.0 mm
Exif.Photo.MakerNote          Undefined     816  (Binary value suppressed)
Exif.MakerNote.Offset         Long           1  1114
Exif.MakerNote.ByteOrder      Ascii          3  II
Exif.Fujifilm.Version         Undefined      4  48 49 51 48
Exif.Fujifilm.SerialNumber    Ascii         48  FPX 21119198      593130323434120209FD8030111764
Exif.Fujifilm.Quality         Ascii          8  NORMAL
Exif.Fujifilm.Sharpness       Short          1  Normal
Exif.Fujifilm.WhiteBalance    Short          1  Auto
Exif.Fujifilm.Color           Short          1  Normal
Exif.Fujifilm.FlashMode       Short          1  Off
Exif.Fujifilm.FlashStrength   SRational     1  0/100
Exif.Fujifilm.Macro           Short          1  On
Exif.Fujifilm.FocusMode       Short          1  Auto
Exif.Fujifilm.SlowSync        Short          1  Off
Exif.Fujifilm.PictureMode     Short          1  Aperture-priority AE
Exif.Fujifilm.Continuous      Short          1  Off
Exif.Fujifilm.SequenceNumber  Short          1  0
Exif.Fujifilm.BlurWarning     Short          1  Off
Exif.Fujifilm.FocusWarning    Short          1  Off
Exif.Fujifilm.ExposureWarning Short          1  Off
Exif.Fujifilm.DynamicRange    Short          1  Standard
Exif.Fujifilm.FilmMode        Short          1  F0/Standard
Exif.Fujifilm.DynamicRangeSetting Short          1  Auto (100-400%)
Exif.Fujifilm.MinFocalLength  Rational       1  3500/100
Exif.Fujifilm.MaxFocalLength  Rational       1  0/100
Exif.Fujifilm.MaxApertureAtMinFocal Rational       1  140/100
Exif.Fujifilm.MaxApertureAtMaxFocal Rational       1  0/100
Exif.Photo.FlashpixVersion    Undefined      4  1.00
Exif.Photo.ColorSpace         Short          1  sRGB
```

```

Exif.Photo.PixelXDimension      Long      1  1920
Exif.Photo.PixelYDimension      Long      1  1280
Exif.Photo.InteroperabilityTag  Long      1  1930
Exif.Top.InteroperabilityIndex  Ascii     4  R98
Exif.Top.InteroperabilityVersion Undefined  4  1.00
Exif.Photo.FocalPlaneXResolution Rational   1  820
Exif.Photo.FocalPlaneYResolution Rational   1  820
Exif.Photo.FocalPlaneResolutionUnit Short     1  cm
Exif.Photo.SensingMethod        Short     1  One-chip color area
Exif.Photo.FileSource           Undefined  1  Digital still camera
Exif.Photo.SceneType            Undefined  1  Directly photographed
Exif.Photo.CustomRendered       Short     1  Normal process
Exif.Photo.ExposureMode         Short     1  Auto
Exif.Photo.WhiteBalance         Short     1  Auto
Exif.Photo.FocalLengthIn35mmFilm Short     1  53.0 mm
Exif.Photo.SceneCaptureType     Short     1  Standard
Exif.Photo.Sharpness            Short     1  Normal
Exif.Photo.SubjectDistanceRange Short     1  Unknown
Exif.Photo.LensSpecification    Rational   4  3500/100 0/100 140/100 0/100
Exif.Photo.LensMake             Ascii     13 FUJIFILM
Exif.Photo.LensModel            Ascii     64 XF35mmF1.4 R
Exif.Photo.LensSerialNumber     Ascii     11 21A01441
Exif.Image.PrintImageMatching   Undefined 106 80 114 105 110 116 73 77 0 48 50 53 48 0 0 3 0 2 0
  1 0 0 0 3 0 34 0 0 0 1 1 0 0 0 0 9 17 0 0 16 39 0 0 11 15 0 0 16 39 0 0 151 5 0 0 16 39 0 0 176 8 0 0 16 39 0
  0 1 28 0 0 16 39 0 0 94 2 0 0 16 39 0 0 139 0 0 0 16 39 0 0 203 3 0 0 16 39 0 0 229 27 0 0 16 39 0 0
Exif.Thumbnail.Compression      Short     1  JPEG (old-style)
Exif.Thumbnail.Orientation      Short     1  top, left
Exif.Thumbnail.XResolution      Rational   1  72
Exif.Thumbnail.YResolution      Rational   1  72
Exif.Thumbnail.ResolutionUnit    Short     1  inch
Exif.Thumbnail.JPEGInterchangeFormat Long       1  2078
Exif.Thumbnail.JPEGInterchangeFormatLength Long       1  9361
Exif.Thumbnail.YCbCrPositioning Short     1  Co-sited
Exif.Image2.JPEGInterchangeFormat Long       1  148
Exif.Image2.JPEGInterchangeFormatLength Long       1  543351
510 rmills@rmillsmbp:~/clanmills $

```

#3 - 26 Nov 2015 09:12 - Max Pozdeev

Can not confirm, image size is detected as 1920 x 1280 .

#4 - 26 Nov 2015 09:37 - Robin Mills

- Status changed from Resolved to Assigned
- % Done changed from 100 to 0
- Estimated time changed from 1.00 h to 4.00 h

You are right. Apologies. I mistakenly thought the bug was "no metadata at all!". I've reset the %Done to zero and assigned myself to investigate.

The engineer on Team Exiv2 who deals with MakerNotes has gone back to college (on top of his full-time demanding job) and I have agreed to deal with makernotes. I'm on a learning curve here. However I surprised myself by solving something quite complicated in the Pentax Maker Notes a few weeks ago. So now it's time to investigate Fuji. This might even be interesting! The Exif committee avoided negotiating tags for many things by creating a considerable body of mysteriously (and largely undocumented) MakerNotes.

#5 - 04 Jan 2016 11:33 - Robin Mills

- % Done changed from 0 to 10

I'm reviewing all the outstanding issue for v0.26 to get a more accurate assessment of the project completing on time. I'll set this at 10% done.

#6 - 17 Apr 2016 19:03 - Robin Mills

- Status changed from Assigned to Resolved
- % Done changed from 10 to 100

I think this is a duplicate for [#1179](#) for which Pascal has submitted a patch and test files. I'm going to mark this 100%/resolved.

```

566 rmills@rmillsmbp:~/gnu/exiv2/team/contrib/redmine $ exiv2 -pa ~/Downloads/filmstyles/*.RAF | grep -i dimen
/Users/rmills/Downloads/filmstyles/DSCF0826.RAF Exif.Photo.PixelXDimension      Long      1  1
920
/Users/rmills/Downloads/filmstyles/DSCF0826.RAF Exif.Photo.PixelYDimension      Long      1  1
280

```

```

/Users/rmills/Downloads/filmstyles/DSCF0840.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF0840.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF0856.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF0856.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF0868.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF0868.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF0879.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF0879.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF0897.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF0897.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF1188.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF1188.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF1189.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF1189.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF1190.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF1190.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF1191.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF1191.RAF Exif.Photo.PixelYDimension Long 1 1
280
/Users/rmills/Downloads/filmstyles/DSCF1192.RAF Exif.Photo.PixelXDimension Long 1 1
920
/Users/rmills/Downloads/filmstyles/DSCF1192.RAF Exif.Photo.PixelYDimension Long 1 1
280
567 rmills@rmillsmbp:~/gnu/exiv2/team/contrib/redmine $

```

#7 - 20 Apr 2016 16:44 - Max Pozdeev

Can not confirm. This issue is about "Raw image size".

#8 - 20 Apr 2016 17:06 - Robin Mills

- Status changed from Resolved to New
- Assignee deleted (Robin Mills)
- Target version changed from 0.26 to 1.0
- % Done changed from 100 to 0
- Estimated time deleted (4.00 h)

Max

I've run both exiftool and exiv2 on the .RAF files available from <http://www.rawsamples.ch/index.php/en/> You are right, there is something weird about this.

```

794 rmills@rmillsmbp:/mmHD/Users/rmills/Jenkins/testfiles/992 $ exiv2 -pa --grep dimension/i fuji/RAW_FUJI_FI
NEPIX_HS10.RAF
Exif.Photo.PixelXDimension Long 1 2048
Exif.Photo.PixelYDimension Long 1 1536
795 rmills@rmillsmbp:/mmHD/Users/rmills/Jenkins/testfiles/992 $ exiftool fuji/RAW_FUJI_FINEPIX_HS10.RAF | gre
p -i raw
File Name : RAW_FUJI_FINEPIX_HS10.RAF
Raw Image Full Width : 3664
Raw Image Full Height : 2742
796 rmills@rmillsmbp:/mmHD/Users/rmills/Jenkins/testfiles/992 $

```

I am not going to do anything further on this matter for v0.26 and it will be deferred for v1.0. There is an outstanding issue [#992](#) to review all our RAW support and this matter will be investigated as part of [#992](#). I think this would be a good project for a student to tackle during Google Summer of

Code 2017.

Files

exiftool.v.output

6 KB

10 May 2015

Alan Pater