Exiv2 - Bug #1083

Exiv2::focalLength returns multiple values for CRW files

17 May 2015 16:40 - Pedro Côrte-Real

Status:	Closed		**Start date:**	17 May 2015
Priority:	Normal		**Due date:**	
Assignee:	Robin Mills		**% Done:**	100%
Category:	not-a-bug		**Estimated time:**	0.00 hour
Target version:	0.26			

Description

For CRW files[1] Exiv2::focalLength returns 4 unsigned short values in total in the form [0, X, 914, 610] where X is the actual focal length. The exiv2 tool seems to do the right thing and report X but a naive implementation that just does getFloat() will get 0 instead of X. It would probably make more sense to return X directly unless the other values actually mean anything.

In darktable I just fixed it by taking the first non-zero value[2], but that could very well be wrong in some cases still.

[1] http://rawsamples.ch/raws/canon/300d/RAW_CANON_300D.CRW
[2] https://github.com/darktable-org/darktable/commit/ab59f7c6fbc7f86821576100ff4ea9779bc4e719

History

#1 - 17 May 2015 16:49 - Pedro Côrte-Real

exiftool seems to think the second value is the focal length and the other two are the sensor width and height:

http://www.sno.phy.queensu.ca/~phil/exiftool/canon_raw.html

#2 - 22 Aug 2015 10:31 - Robin Mills

- Category changed from image format to not-a-bug

- Status changed from New to Closed

- Assignee set to Robin Mills

- Target version set to 0.26

Exiv2 correctly lists the information in the file:

```
714 rmills@rmillsmbp:~/Downloads $ exiv2 -pv -g Focal RAW_CANON_300D.CRW
0x0002 Canon          FocalLength                Short       4  0 36 914 610
715 rmills@rmillsmbp:~/Downloads $
```

If can wanted to report an array of 4 shorts, that is what they have chosen to do. Exiv2 is not a metadata policeman, he reports what is in the file.

#3 - 22 Aug 2015 10:43 - Pedro Côrte-Real

Calling tag 0x1029 or the CRW format FocalLength was exiv2's decision it's not a particularly good name as the focal length is the second value and there are two other potentially useful values there. Additionally even if you want the tag to return the 4 values surely focalLength(), if it's going to be useful, needs to actually deal with the quirks each format has. For the CRW format that means taking the second value in that tag.

#4 - 22 Aug 2015 16:12 - Robin Mills

- % Done changed from 0 to 100

#5 - 22 Aug 2015 16:18 - Pedro Côrte-Real

This makes no sense but we need to carry the workaround for this bug for existing versions anyway...

https://github.com/darktable-org/darktable/blob/master/src/common/exif.cc#L474-L477