

Exiv2 - Bug #864

Mapping of Exif DateTime fields to XMP changed in spec

30 Oct 2012 11:36 - Marcel Wiesweg

Status:	Closed	Start date:	30 Oct 2012
Priority:	Normal	Due date:	
Assignee:	Alan Pater	% Done:	100%
Category:	metadata	Estimated time:	0.00 hour
Target version:	0.25		
Description			
In contrast to an older version of the XMP specification, the mapping of these two Exif field to their XMP counterparts, as defined in converter.cpp, is in the latest XMP specification, the MWG guidance 2.0, and Exif 2.3 for XMP as follows:			
Exif.Image.DateTime -> xmp:ModifyDate and probably tiff:DateTime ()			
Exif.Photo.DateTimeOriginal -> photoshop:DateCreated and exif:DateTimeOriginal (*)			
Exif.Photo.DateTimeDigitized -> xmp:CreateDate			
() Interestingly, tiff:DateTime disappeared from Exif 2.3 for XMP. Looks like a mistake in the spec.			
(*) MWG guidance and Exif 2.3 contradict			
Related issues:			
Related to Exiv2 - Feature #1050: Extend exif <> iptc <> xmp conversions		Assigned	04 Apr 2015
Related to Exiv2 - Bug #1112: lost timezone information in XMP dates		Closed	28 Aug 2015

Associated revisions

Revision 3665 - 09 Apr 2015 14:45 - Alan Pater

#864 Reverse DateTime mappings from r3659 that fail conversion testcase 14

Revision 3712 - 21 Apr 2015 15:01 - Alan Pater

#864 Update DateTime conversions to current spec

Revision 3750 - 28 Apr 2015 03:56 - Niels Kristian Bech Jensen

#864: Update bugfixes-test.out to match r3712.

History

#1 - 30 Oct 2012 13:55 - Marcel Wiesweg

(second part again, formatting was screwed up by stars)

Exif.Image.DateTime -> xmp:ModifyDate and probably tiff:DateTime (1)

Exif.Photo.DateTimeOriginal -> photoshop:DateCreated and exif:DateTimeOriginal (2)

Exif.Photo.DateTimeDigitized -> xmp:CreateDate

(1) Interestingly, tiff:DateTime disappeared from Exif 2.3 for XMP. Looks like a mistake in the spec.

(2) MWG guidance and Exif 2.3 contradict

#2 - 05 Apr 2015 14:03 - Alan Pater

- Category set to metadata

- Status changed from New to Assigned

- Assignee set to Alan Pater

- Target version set to 0.25

- % Done changed from 0 to 100

#3 - 09 Apr 2015 12:46 - Alan Pater

- % Done changed from 100 to 50

[r3659](#) made these changes, but the test suite conversions.sh does not like them. I am re-evaluating the changes.

#4 - 09 Apr 2015 15:38 - Alan Pater

The test suite sets different values for `Exif.Photo.DateTimeOriginal` and `Iptc.Application2.DateCreated` but MWG guidelines map these together. The `DateTime` test cases will need changing as well.

Follows are the various `Date/Time` fields that should be mapped together, according to the MWG.

Original `Date/Time` – Creation date of the intellectual content.

```
Exif.Photo.DateTimeOriginal / Exif.Photo.SubSecTimeOriginal
Iptc.Application2.DateCreated / Iptc.Application2.TimeCreated
Xmp.photoshop.DateCreated
```

Digitized `Date/Time` – Creation date of the digital representation.

```
Exif.Photo.DateTimeDigitized &/ Exif.Photo.SubSecTimeDigitized
Iptc.Application2.DigitizationDate / Iptc.Application2.DigitizationTime
Xmp.xmp.CreateDate
```

Modification `Date/Time` – Modification date of the digital image file.

```
Exif.Image.DateTime / Exif.Photo.SubSecTime
Xmp.xmp.ModifyDate
```

Regarding the modify date, that is only if the image itself is modified. If only the metadata is modified, we have the following field, although without MWG guidance: `Metadata Date/Time` – Modification date of the metadata

```
Xmp.xmp.MetadataDate
```

I think the MWG guidelines should take precedence over the `xmp.tiff` mappings, where MWG guidance exists. MWG guidelines are what all the different parties agree to when working together. The other guidelines are what each individual group does in their own house, so to speak.

If there is no disagreement, I will get to work on all this.

#5 - 13 Apr 2015 16:02 - Alan Pater

- File `iptcConvert.diff` added

To perform the IPTC <> XMP conversions I created a couple of new functions: `cnvIptcDate` and `cnvXmpDateToIptc`, based on `cnvIptcValue` and `cnvXmpDValueToIptc`, respectively.

It works for me, but I need to do further testing before submitting the code. If someone could take a look at the attached patch and see if there are any silly errors, that would be great.

#6 - 16 Apr 2015 19:24 - Alan Pater

- % Done changed from 50 to 90

I want to backtrack and make this issue only be about the changes to the XMP mappings, not the IPTC mappings.

This is because my testing shows that converting from IPTC is a lot more complicated than I originally thought, due to IPTC not having anywhere to store `subSec` times and EXIF not having anywhere to store `TimeZone` data. And probably due to some misunderstanding on my part. I'll make the IPTC mappings in Issue [#1050](#).

#7 - 16 Apr 2015 19:31 - Alan Pater

With that, this is almost complete. One area of confusion remains for me. In test 15 of `conversions.sh`, the `timezone` is specified when the XMP sidecar is imported into the image. I am not sure why that is there.

My revised test leaves out the `timezone`. I should also mention that my test server `timezone` is set to UTC. Is that important?

```
~/src/exiv2$ diff trunk/test/conversions.sh work/test/conversions.sh
```

```
205c205
< TZ=GMT-8 runTest exiv2 -iX v.jpg
---
> runTest exiv2 -iX v.jpg
```

#8 - 20 Apr 2015 16:40 - Alan Pater

- File 864.simple.diff added

This patch does what I think is the minimum to bring the mapping of DateTime up to spec.

- 1) It maps the DateTime keys/properties according to MWG guidelines.
- 2) It modifies test/conversions.sh to be consistent with those mappings.
- 3) It validates and confirms the resulting differences to test/data/conversions.out

#9 - 20 Apr 2015 16:40 - Alan Pater

- File deleted (iptcConvert.diff)

#10 - 21 Apr 2015 12:55 - Alan Pater

- File deleted (864.simple.diff)

#11 - 21 Apr 2015 12:55 - Alan Pater

- File 864.MWG.simple.diff added

#12 - 22 Apr 2015 20:26 - Alan Pater

- Status changed from Assigned to Resolved

- % Done changed from 90 to 100

#13 - 21 Jun 2015 16:42 - Andreas Huggel

- Status changed from Resolved to Closed

Files

864.MWG.simple.diff

9.65 KB

21 Apr 2015

Alan Pater