

Exiv2 - Bug #784

Writing Xmp.Ir.hierarchicalSubject writes wrong datatype

02 Aug 2011 16:25 - Lucas Beeler

Status: Closed	Start date: 02 Aug 2011
Priority: Normal	Due date:
Assignee: Alan Pater	% Done: 100%
Category: xmp	Estimated time: 0.00 hour
Target version: 0.25	
Description Right now, exiv2 writes the Xmp.Ir.hierarchicalSubject field as XmpText when it should be an XmpBag. This isn't surprising, being that the Adobe Lightroom schema (which defines Xmp.Ir.hierarchicalSubject) isn't supported. So maybe this is a "feature" (support the Lightroom schema) more than a "bug", but it seems like a bug to me. I hack on Shotwell, a popular, open-source photo organizer for GNOME, and because of this issue we can't write out tags that are intelligible to Adobe Lightroom users. This is exceedingly unfortunate, because Lightroom is the most popular pro-level commercial photo organizer in the world. :-)	
Related issues: Related to Exiv2 - Feature #1040: MWG-KW schema Closed 12 Mar 2015	

Associated revisions

Revision 3384 - 31 Oct 2014 05:52 - Robin Mills

Issue: #784. Thanks to Alan for the patch. See topic: <http://dev.exiv2.org/boards/3/topics/1847>

Revision 3643 - 25 Mar 2015 20:54 - Robin Mills

#784 and #1040. Test regression detector.

Revision 3644 - 25 Mar 2015 22:19 - Robin Mills

#784. Change requested by Alan (typos).

Revision 3645 - 25 Mar 2015 23:37 - Robin Mills

#784 Modified the test regression detector submitted in r3643. Thank You Alan for your explanation.

Revision 3656 - 03 Apr 2015 15:58 - Alan Pater

#784 doc template for Ir schema

History

#1 - 04 Aug 2011 07:29 - Andreas Huggel

- Status changed from New to Feedback

Well, you're right, Exiv2 doesn't know the Lightroom schema yet. But that shouldn't stop you from registering the Ir prefix and adding this property with a value of the correct type anyway. Along the lines of the examples here: <http://www.exiv2.org/example5.html>

Andreas

#2 - 29 Oct 2014 22:17 - Alan Pater

- File 784.diff added

#3 - 31 Oct 2014 05:57 - Robin Mills

- Status changed from Feedback to Resolved

- Assignee set to Robin Mills

- Target version set to 0.25

Thank you Alan for the patch. You're as helpful as always. I've submitted this [r3384](http://dev.exiv2.org/boards/3/topics/1847). Other notes: <http://dev.exiv2.org/boards/3/topics/1847>

#4 - 15 Mar 2015 02:48 - Alan Pater

- File Ir.typo.patch added

On re-testing my previous patch, I came across a couple of functionally non-trivial typos. Please update with the attached patch.

"hierarchicsubject" should have been "hierarchicalSubject"
"privatertkinfo" should have been "privateRTKInfo"

#5 - 15 Mar 2015 22:23 - Robin Mills

- Status changed from Resolved to Assigned

Thanks, Alan. I've changed the status to "Assigned" to ensure this gets my attention. I'll submit your patch in the next few days.

#6 - 24 Mar 2015 22:38 - Alan Pater

Thomas, Robin, can we test this one as well? It's a tiny change.

#7 - 24 Mar 2015 22:47 - Thomas Beutlich

Do you mean the two typo fixes? Patch is OK, but I cannot judge which names are "better".

#8 - 24 Mar 2015 22:49 - Robin Mills

I've lost the plot here, Alan. (it's been a very long 12-hour day on Exiv2). Do you have a test JPG to be added to the test suite?

Most of our tests simply run some exiv2 commands on one or more files. The terminal output is compared to a reference file. If the output doesn't change we say it has passed. I think this is simply about typos in the output I only need to run exiv2 -pa bug-784.jpg and add the reference file.

#9 - 24 Mar 2015 23:33 - Alan Pater

- File exiv2.lr.jpg added

Here goes. That attached test file has had Xmp.lr.hierarchicalSubject written by this patch to exiv2. The correct spelling of the XMP property is Xmp.lr.hierarchicalSubject

I have included a copyright notice putting the image in the public domain. That means to me that anyone can do whatever they like with the image.

The Xmp.lr.privateRTKInfo property does not appear in this image. If I understand correctly, it is a internal property used in Adobe products. My tests with a trial version of Lightroom don't show that property. I've included it in the patch for completeness and because exiftool does. Just don't ask me what it is for! ;-)

#10 - 24 Mar 2015 23:38 - Alan Pater

As far as "which names are better", "hierarchicalSubject" and "privateRTKInfo" agree with exiftool and Adobe products. If the capitalization is different, the data is written to redundant and different properties. "hierarchicalSubject" is correct. "hierarchicsubject" is wrong.

#11 - 25 Mar 2015 01:42 - Alan Pater

- File exiv2.lr.jpg added

Same sample file after opening and adding tags in Lightroom.

Lightroom read the hierachical subject tags written by exiv2. Adding another hierarchical tag through Lightroom works correctly.

```
$ exiv2 -pa exiv2.lr.jpg | grep Xmp.lr
Xmp.lr.hierarchicalSubject      XmpBag    2  root0|next1|next2, root|1st|2nd
```

The "root0|next1|next2" hierarchy was added by exiv2. "root|1st|2nd" was added by Adobe Lightroom.

My trial version of Lightroom did NOT add the Xmp.lr.privateRTKInfo property.

#12 - 25 Mar 2015 14:38 - Alan Pater

Also regarding the typo and getting back to the title of this report: "Writing Xmp.lr.hierarchicalSubject writes wrong datatype"

Without the typo fix, that issue remains. Xmp.lr.hierarchical*S*ubject will write the wrong datatype. Xmp.lr.hierarchical*s*ubject will write the correct datatype, but will not be compatible with Adobe and other applications.

#13 - 25 Mar 2015 20:57 - Robin Mills

- Assignee changed from Robin Mills to Alan Pater

Submitted: [r3543](#)

Alan:

I've reported my action in [#1040](#). I hope I've got this correct. I've assigned this issue to you. If you're happy, mark it (and [#1040](#)) as Resolved. If you're not - assign them back to me for further attention.

#14 - 25 Mar 2015 21:35 - Alan Pater

- File *lightroom.diff* added
- Assignee changed from Alan Pater to Robin Mills

Apologies for being so confusing this report. We still need this patch with the correct capitalization applied.

#15 - 25 Mar 2015 22:19 - Robin Mills

Alan

I've applied your patch (*lightroom.diff*), built it and ran the test suite. Nothing seems to have changed. So I've taken a fresh copy of the code and built it. Still nothing has changed. Conclusion: my test is ineffective. However I've submitted the change: [r3644](#)

This is the output (both before and after the change):

```
964 rmills@rmillsmbp:~/gnu/exiv2/trunk/test $ exiv2 -px data/exiv2-bug784.jpg
Xmp.dc.format XmpText 10 image/jpeg
Xmp.dc.rights LangAlt 1 lang="x-default" Public Domain. Do whatever you like with this image
Xmp.dc.subject XmpBag 6 1st, 2nd, next1, next2, root, root0
Xmp.xmpMM.DocumentID XmpText 32 004D48F936062EF5085A81BF96D4C494
Xmp.xmpMM.OriginalDocumentID XmpText 32 004D48F936062EF5085A81BF96D4C494
Xmp.xmpMM.InstanceID XmpText 44 xmp.iid:f74f0d02-e921-134e-8107-1dda17aad853
Xmp.xmpMM.History XmpText 0 type="Seq"
Xmp.xmpMM.History[1] XmpText 0 type="Struct"
Xmp.xmpMM.History[1]/stEvt:action XmpText 5 saved
Xmp.xmpMM.History[1]/stEvt:instanceID XmpText 44 xmp.iid:f74f0d02-e921-134e-8107-1dda17aad853
Xmp.xmpMM.History[1]/stEvt:when XmpText 25 2015-03-24T20:35:55-05:00
Xmp.xmpMM.History[1]/stEvt:softwareAgent XmpText 39 Adobe Photoshop Lightroom 4.4 (Windows)
Xmp.xmpMM.History[1]/stEvt:changed XmpText 9 /metadata
Xmp.xmp.MetadataDate XmpText 25 2015-03-24T20:35:55-05:00
Xmp.crs.RawFileName XmpText 12 exiv2.lr.jpg
Xmp.lr.hierarchicalSubject XmpBag 2 root0|next1|next2, root|1st|2nd
965 rmills@rmillsmbp:~/gnu/exiv2/trunk/test $
```

Unfortunately, I don't know anything about this part of the code. I really haven't a clue what this is about!

#16 - 25 Mar 2015 22:23 - Robin Mills

- Assignee changed from Robin Mills to Alan Pater

#17 - 25 Mar 2015 23:15 - Alan Pater

The difference is when one does not include the xmp type (XmpBag) when writing this property.

[r3643](#) results in the wrong type (XmpText)

```
~$ exiv2 -M"add Xmp.lr.hierarchicalSubject root|1st|2nd|3rd|4th|5th" exiv2.lr.r3643.jpg
```

```
Xmp.lr.hierarchicalSubject XmpText 24 root|1st|2nd|3rd|4th|5th
```

UNLESS one is explicit about the type.

```
~$ exiv2 -M"add Xmp.lr.hierarchicalSubject XmpBag root|1st|2nd|3rd|4th|5th" exiv2.lr.r3643.jpg
```

```
Xmp.lr.hierarchicalSubject XmpBag 1 root|1st|2nd|3rd|4th|5th
```

[r3644](#) results in the correct type (XmpBag) without have to be explicit.

```
~$ exiv2 -M"add Xmp.lr.hierarchicalSubject root|1st|2nd|3rd|4th|5th" exiv2.lr.r3644.jpg
```

```
Xmp.lr.hierarchicalSubject XmpBag 1 root|1st|2nd|3rd|4th|5th
```

#18 - 25 Mar 2015 23:30 - Robin Mills

Right. I'll update the test to

```
exiv2 -M"add Xmp.lr.hierarchicalSubject root|1st|2nd|3rd|4th|5th" exiv2.lr.r3643.jpg
exiv2 -px exiv2.lr.r3643.jpg
```

I call a test like this a "Test regression detector" because the test will report an exception if the fix disappears.

I'll do that now and then I'm off to bed. It's been another 12 hour day on Exiv2. [r3645](#)

#19 - 26 Mar 2015 13:30 - Alan Pater

- Status changed from Assigned to Resolved

Yes, it works as expected now. Thanks!

#20 - 08 May 2015 16:21 - Alan Pater

- % Done changed from 0 to 100

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

- Status changed from Resolved to Closed

Files

784.diff	2.98 KB	29 Oct 2014	Alan Pater
lr.typo.patch	902 Bytes	15 Mar 2015	Alan Pater
exiv2.lr.jpg	11.9 KB	24 Mar 2015	Alan Pater
exiv2.lr.jpg	13.3 KB	25 Mar 2015	Alan Pater
lightroom.diff	936 Bytes	25 Mar 2015	Alan Pater