

## Exiv2 - Feature #620

### Update Nikon makernotes

14 Mar 2009 08:46 - Andreas Huggel

<b>Status:</b>	Closed	<b>Start date:</b>	14 Mar 2009
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Andreas Huggel	<b>% Done:</b>	100%
<b>Category:</b>	exif	<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>	0.19		

#### Description

Nikon makernotes contain tags which Exiv2 currently doesn't decode. Most of these are stored in binary arrays with some peculiarities to make things interesting:

- Some of these binary arrays are encrypted
- Some use a specific byte order
- Some binary arrays are specific for a certain camera model or tag version

A new TiffComponent pair is required, essentially a generalization of the existing TiffArrayEntry and TiffArrayElement components. The new components should replace these, i.e., implement the existing functionality (used for Canon and Minolta makernote tags) as well.

#### Related issues:

Related to Exiv2 - Bug # 636: Exiv2 corrupts certain NEF images when writing ...	<b>Closed</b>	<b>22 May 2009</b>
Related to Exiv2 - Feature # 667: Update Canon makernote	<b>Closed</b>	<b>29 Dec 2009</b>
Related to Exiv2 - Feature # 666: Optimize binary array elements	<b>Closed</b>	<b>29 Dec 2009</b>
Related to Exiv2 - Bug # 677: Nikon Makernote tags regression in exiv 0.19	<b>Closed</b>	<b>27 Jan 2010</b>

#### Associated revisions

##### Revision 1772 - 21 Mar 2009 02:43 - Andreas Huggel

#620: Part 1, basic TiffBinaryArray and TiffBinaryElement framework and Nikon World Time binary array as a first use-case.

##### Revision 1813 - 02 Jun 2009 06:53 - Andreas Huggel

#620: Intermediate commit on the way to replace TiffArrayEntry/Element.

##### Revision 1814 - 02 Jun 2009 09:33 - Andreas Huggel

#620: Another step towards TiffArrayEntry obsolescence.

##### Revision 1815 - 03 Jun 2009 10:02 - Andreas Huggel

#620: Allow binary array entries with only cfg (no def), converted CanonSi entry.

##### Revision 1864 - 18 Jul 2009 05:17 - Andreas Huggel

Back to #620: Migrated remaining Canon arrays to the new binary array component.

##### Revision 1865 - 18 Jul 2009 09:19 - Andreas Huggel

#620: Migrated Minolta arrays to the new binary array component, extended related Makernote test coverage a bit.

**Revision 1866 - 18 Jul 2009 09:30 - Andreas Huggel**

#620: Removed obsolete TIFF array components.

**Revision 1867 - 19 Jul 2009 03:33 - Andreas Huggel**

#620: Added Nikon ISO info array.

**Revision 1868 - 19 Jul 2009 03:48 - Andreas Huggel**

#620: Fixed type of Nikon Timezone tag.

**Revision 1871 - 21 Jul 2009 08:43 - Andreas Huggel**

#620: Removed the need to configure tagStep, use the size of the default tag instead.

**Revision 1872 - 23 Jul 2009 00:40 - Andreas Huggel**

#620: Preparations for encrypted arrays.

**Revision 1874 - 25 Jul 2009 23:54 - Andreas Huggel**

#620: Reading of 'complex' arrays and parts of the LensData groups as a first use-case. (INCOMPLETE AND BARELY TESTED)

**Revision 1878 - 12 Aug 2009 07:56 - Andreas Huggel**

#620: Added decryption for Nikon arrays.

**Revision 1883 - 13 Aug 2009 04:25 - Andreas Huggel**

#620: Added re-encryption of binary arrays for non-intrusive writing.

**Revision 1884 - 21 Aug 2009 02:06 - Andreas Huggel**

#620: Added initialization of complex binary array for intrusive writing.

**Revision 1885 - 21 Aug 2009 02:19 - Andreas Huggel**

#620: Fixed minor blunder.

**Revision 1886 - 21 Aug 2009 22:54 - Andreas Huggel**

#620: Finished non-intrusive writing part, updates tests.

**Revision 1887 - 22 Aug 2009 08:51 - Andreas Huggel**

#620: Added Color Balance complex binary array.

**Revision 1888 - 22 Aug 2009 10:09 - Andreas Huggel**

#620: Color balance tweaks.

**Revision 1922 - 13 Nov 2009 21:20 - Andreas Huggel**

#620: Updated test results.

**Revision 1923 - 13 Nov 2009 23:30 - Andreas Huggel**

#620: Updated another test result.

**Revision 1945 - 28 Nov 2009 01:41 - Andreas Huggel**

#620: Removed assertion. For decrypted tags, the condition can be false.

**Revision 1948 - 28 Nov 2009 23:16 - Andreas Huggel**

#620: Added support for Nikon Vibration Reduction and Picture Control Tags.

**Revision 1949 - 28 Nov 2009 23:40 - Andreas Huggel**

#620: Fixed a few Nikon tag names.

**Revision 1950 - 29 Nov 2009 02:42 - Andreas Huggel**

#620: Added support for Nikon Auto Focus Tags.

**Revision 1953 - 04 Dec 2009 09:40 - Andreas Huggel**

#620: Added support for Nikon Shot Info tags.

## History

---

**#1 - 21 Mar 2009 02:40 - Andreas Huggel**

- Target version changed from 0.18.1 to 1.0

Unfortunately, this has to go into 0.19: I just realized the change is not binary compatible with 0.18 (it introduces new IfdId enum values which I can't simply append).

**#2 - 20 May 2009 08:01 - Andreas Huggel**

- *Target version deleted (1.0)*

**#3 - 25 Jun 2009 08:38 - Andreas Huggel**

- *Target version set to 0.19*

**#4 - 23 Aug 2009 04:05 - Andreas Huggel**

- *% Done changed from 0 to 80*

**#5 - 27 Dec 2009 16:50 - Andreas Huggel**

- *Status changed from New to Resolved*

- *% Done changed from 80 to 100*

Makernotes are moving targets, there are a few more composite tags left, to be implemented in another round, together with efficiency improvements.

**#6 - 30 Dec 2009 07:50 - Andreas Huggel**

- *Status changed from Resolved to Closed*