
Subject: Re: Writing PNG file in pure IDL with metadata
Posted by [Mariolncandenza](#) on Tue, 08 Dec 2015 21:52:36 GMT
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On Monday, December 7, 2015 at 7:16:35 PM UTC-8, andrew...@gmail.com wrote:

> On Thursday, 22 October 2015 03:43:41 UTC+10:30, Jim P wrote:

>> On Tuesday, October 20, 2015 at 5:28:09 AM UTC-6, andrew...@gmail.com wrote:

>>> On Tuesday, 20 October 2015 21:53:42 UTC+10:30, Mark Hadfield wrote:

>>>> On Tuesday, 20 October 2015 20:39:13 UTC+13, andrew...@gmail.com wrote:

>>>> > Hi All,

>>>> >

>>>> > I have a bunch of Canon RAW .CR2 files that I'd like to transmogrify

>>>> > into PNG files with nice informative metadata embedded in them.

>>>> >

>>>> > Unfortunately IDL's inbuilt READ_PNG and WRITE_PNG don't know that PNG files can

>>>> > take metadata, and it looks like I'll be old, fat and bald before they do.

>>>> > Wait, I am old, fat and bald... :-(

>>>> >

>>>> > Anyway, I wondering if anyone has invented this particular wheel before.

>>>> > I'd be happy to work with a pure IDL write routine, or some method of Spawning off a

>>>> > command to a 3rd party program.

>>>> >

>>>> > TIA,

>>>> >

>>>> > Andrew

>>>>

>>>> ImageMagick should do this:

>>>>

>>>> <http://www.imagemagick.org/Usage/basics/#attributes>

>>>>

>>>> It's available on Linux, obviously, and on Windows via Cygwin. I haven't used ImageMagick

>>>> for this purpose but I do regularly use it from IDL for format conversion (usually on windows via

>>>> Cygwin).

>>>>

>>> Thanks Mark. I was thinking I'd have to wait for a reply until the Yanks woke up, but I forgot

>>> about you worthy New Zealanders... ;-)

>>>

>>> Andrew

>>

>> Andrew,

>>

>> Though I can't share it, I wrote a procedure that supports writing both zTXt and tEXt to existing

>> PNG files in fewer than 200 lines of IDL including lots of comments. It could be reduced even

>> more with ZLIB_COMPRESS that was introduced to IDL since my original effort. I had to hack

>> that with a temp file using /COMPRESS at the time.

>>

>> The only remotely tricky part of the code is the application of the CRC. You can find the

>> reference C implementation of the CRC here in Section 3.4:

<http://www.libpng.org/pub/png/spec/1.2/PNG-Structure.html#CR> C-algorithm

```
>>
>> I'd bet you can slap together a working version in less than an hour, which is significantly less
time than you might wait for the feature to show up in a released version of IDL.
>>
>> Jim P
>> "I work for Harris, but speak not for the Corporation"
>
> Thanks Jim,
>
> Yes, I eventually bit the bullet and wrote the whole kit 'n' kaboodle in IDL,
> without any calls to external libraries.
>
> So, it's not the fastest PNG writer you'll ever see, but it does write out
> a standard format Metadata header with our customised fields, and the resulting files can be
read by 3rd party PNG readers.
>
> It would still be nice to see IDL handle metadata reading and writing for all image formats that
support metadata.
>
> Cheers,
>
> Andrew
```

Andrew,

I'm impressed you went through with this. A question: what 3rd party applications have you encountered that can get at the metadata in a PNG file? The only one I know of is the aforementioned ImageMagick.
