QGIS Application - Bug report #348
Crash on OSX when loading GeoTIFF

2006-10-16 06:59 PM - anonymous -

Status:	Closed			
Priority:	Low			
Assignee:	Tom Elwertowski			
Category:	Rasters			
Affected QGIS version:		**Regression?:**	No	
Operating System:	OS X	**Easy fix?:**	No	
Pull Request or Patch supplied:		**Resolution:**	fixed	
Crashes QGIS or corrupts data:		**Copied to github as #:**	10407	

Description

Maybe it's just out of memory, but I get a "Bus Error" when trying to load a large [[GeoTIFF]]. [I guess that's Mac for [[SegFault]]]

Same with 5 different machines with the same setup.

PPC [[MiniMac]] with 512mb RAM. (but out of memory shouldn't cause a bus error?) I'll see if I can try a smaller [[GeoTIFF]].

It also crashed sometimes when loading a large shapefile.
(but then worked on restart)

the same file loaded fine in 0.7.4 on Windows.

file size is 120361625 (115M)

$ gdalinfo
Driver: GTiff/GeoTIFF
Size is 10720, 12320
Coordinate System is:
PROJCS["New Zealand Map Grid",
    GEOGCS["international",
        DATUM["New_Zealand_Geodetic_Datum_1949",
            SPHEROID["International 1924",6378388,297.000000000005,
                AUTHORITY[[EPSG""7022]],
            AUTHORITY[[EPSG""6272]],
        PRIMEM[[Greenwich]],
        UNIT[[degree]],
    PROJECTION[[New_Zealand_Map_Grid]],
    PARAMETER[[latitude_of_origin]],
    PARAMETER[[central_meridian]],
    PARAMETER[[false_easting]],
    PARAMETER[[false_northing]],
    UNIT["metre",1,
        AUTHORITY[[EPSG""9001]]
Origin = (2309200.000000,5502100.000000)
Pixel Size = (2.50000000,-2.50000000)
Metadata:
  AREA_OR_POINT=Area
Corner Coordinates:
Upper Left (2309200.000, 5502100.000) (170d25'28.64"E, 45d39'43.78"S)
Lower Left (2309200.000, 5471300.000) (170d24'44.63"E, 45d56'20.82"S)

Upper Right (2336000.000, 5502100.000) (170d46'6.08"E, 45d40'8.69"S)
Lower Right (2336000.000, 5471300.000) (170d45'28.13"E, 45d56'45.79"S)
Center   (2322600.000, 5486700.000) (170d35'26.88"E, 45d48'15.25"S)
Band 1 Block=10720x1 Type=Int16, [[ColorInterp]]=Gray
 [[NoData]] Value=0
Metadata:
 COLOR_TABLE_RULES_COUNT=1
 COLOR_TABLE_RULE_RGB_0=0.000000e+00 2.550000e+02 0 0 0 255 255 255

History

#1 - 2006-10-16 07:00 PM - anonymous -

(exported from GRASS)

#2 - 2006-11-10 07:07 PM - Gavin Macaulay -

This may have been the same problem as ticket #248, which was recently fixed (commit:60b96fc9 (SVN r6073)). Can you try it again with the latest version of qgis?

#3 - 2006-11-25 10:37 AM - Gary Sherman

Without further input or sample data we can't fix this.

#4 - 2006-12-06 04:55 AM - hamish_nospam-yahoo-com -

Hi, sorry for the delay getting back to you, I hadn't seen the reply.

I am thinking now it has more to do with the export compression options than filesize. I will export using various methods and try and pin down what's failing. I can only test with the available OSX binaries.

thanks,
Hamish

#5 - 2006-12-10 11:22 PM - hamish_nospam-yahoo-com -

Hi, had a chance to do some more testing.

It fails on a Mac with a [[GeoTIFF]] created with gdal_translate.
(DebianGIS gdal package version: 1.3.1-0.dgis.stable.2)

tested with:
 PC: 0.8pre3-cvs binary posted by Tim December 10th.
 Mac: 0.8pre2 binary download linked from .8p2 news item

I tried a number of different export options.

Worked (PC+Mac): GRASS's r.out.tiff C module.
 compress=none,defalte*,lzw,packbit

- deflate failed cleanly on the Mac with "deflate support not configured" error printed to stderr (ran from Terminal). I assume this has to do with the GDAL configure options in the supplied binary. No error window poped up though, just left with a blank screen. Another wierdness on the Mac: the wristwatch hourglass mouse cursor stayed on, always.

Failed (Mac only): export using GRASS 6.2's r.out.gdal, which is just a frontend bash script for gdal_translate with the GDAL/GRASS plugin. compress=none,defalte,lzw,packbit; INTERLEAVE=PIXEL. also tried compress=packbit,INTERLEAVE=BAND with no luck. Worked fine on the PC (0.7.4 and 0.8pre3_Tim_10Dec)

I'll try and upload a crop of the [[GeoTIFF]] here.

Hamish

#6 - 2006-12-10 11:43 PM - anonymous -

link to test data (84kb): (I couldn't figure out how to upload a file to the tracker)
http://bambi.otago.ac.nz/hamish/grass/qgis/nz25_NZMG_gdal_IntPix_Pacbit_crop.tif

create command in GRASS 6.2:

r.out.gdal in=nz25 type=Byte createopt="INTERLEAVE=PIXEL,TFW=YES,COMPRESS=PACKBITS" out=nz25_NZMG_gdal_IntPix_Pacbits_crop.tif -r

#7 - 2006-12-13 11:56 PM - anonymous -

The crash report suggests that the problem is with gdal, not qgis. Your comments also suggest that you're using gdal 1.3.1? There is a later version available that may fix this problem (v1.3.2). Please try that if possible.

#8 - 2006-12-14 08:55 PM - Gary Sherman
- Status changed from Open to Closed
- Resolution set to fixed

The test file works fine for me with latest OS X build, using GDAL 1.31 on a G4 powerbook with 512Mb ram.

I'm closing this ticket but it can be reopened if the problem persists for you in the upcoming preview 3 release.

#9 - 2006-12-17 02:56 PM - anonymous -

Ok, I will retry when OSX binaries for pre3 show up.

Hamish

#10 - 2006-12-17 11:07 PM - anonymous -

> *The crash report suggests that the problem is with gdal, not qgis.*
> *Your comments also suggest that you're using gdal 1.3.1? There is*
> *a later version available that may fix this problem (v1.3.2).*
> *Please try that if possible.*

That is I used GDAL 1.3.1 on Debian/Stable to make the [[GeoTIFF]].

[I have been waiting for the [[DebianGIS]] project to release a GDAL 1.3.2 package for Sarge, but I don't think this is going to happen, so I wait for the next full Debian release (soonish).]

I have just now tried re-exporting the [[GeoTIFF]] using GDAL 1.3.2 by loading the [[GeoTIFF]] into GRASS 6.2.1 on the same Mac (no problems), then re-exporting using r.out.gdal (r.out.gdal is just a script front-end to gdal_translate)). Same Bus Error with the new copy.

The Mac where this fails has GDAL 1.3.2 existing both in the GRASS Frameworks[*] and QGIS 0.8pre2's libgdal1.dynlib 1.3.2.0.

[*] version 17-Dec-2006

- http://www.kyngchaos.com/software/unixport/grass

Hamish

#11 - 2007-01-31 10:54 PM - hamish_nospam-yahoo-com -

- Status changed from Closed to Feedback

- Resolution deleted (fixed)

Hi,

it still crashes with the 0.8.0 release, uploading latest crash info as bug attachment and reopening the bug.

(using Tom Elwertowski's binaries; William's GRASS binaries + frameworks installed on the same machine)

thanks,

Hamish

#12 - 2007-12-07 01:43 PM - Frank Warmerdam -

I have reviewed the traceback and this section:

```
1  libjasper-1.701.1.dylib    0x02507634 GTIFGetGCSInfo + 116
2  libgdal.1.dylib            0x01bcd550 GTIFGetOGISDefn + 352
```

suggests that the build uses the jasper library which has (apparently) a copy of libgeotiff embedded but (presumably) a somewhat different version than is embeded or expected to be used by GDAL. This results in a crash when something is where it is expected. Basically it is very bad karma to have two versions of something like libgeotiff in an application and can result in suprising calls between the two binary incompatible instances.

The solution (IMHO) is that libjasper should be linked against a system libgeotiff instead of using an embedded copy. I don't see this as a QGIS bug - it is a particular issue with the way the packages QGIS depends on have been built. My suggestion is that this bug report be closed, possibly after referring to whoever is behind the build (William?)

#13 - 2008-02-08 03:01 AM - Tim Sutton

- Status changed from Feedback to Closed

- Resolution set to wontfix

As suggested, I have sent William an email asking him to take note of this ticket, and am closing this ticket.

#14 - 2008-02-08 07:10 AM - William Kyngesburye

Hmm, works on my recent 0.9.1 and 0.9.2 binaries. They use GDAL 1.5, libtiff 4 SVN, geotiff 1.2.4. The 0.8.x referred to are probably Tom's all-in-one, since my Qgis binaries use my frameworks. I don't have an extra Mac handy to test my old 0.8 binaries on this, which use GDAL 1.4.

libjasper doesn't link to geotiff or libtiff, as far as I know.

I do remember (kinda hazy, though I reported it) some libtiff crashes when saving with some compressions, but not opening. That was around the GDAL 1.3.1 time - libtiff 3.7-3.8. It was slowly fixed and is fine in 3.9/4.0.

... just a few thoughts. All I can suggest is upgrade to Qgis 0.9.x with latest libraries/frameworks.

#15 - 2008-02-08 01:25 PM - hamish -

William:

> *Hmm, works on my recent 0.9.1 and 0.9.2 binaries.*

...

> *All I can suggest is upgrade to Qgis 0.9.x with latest libraries/frameworks.*

Ok, I will try that and report back.

thanks,
Hamish

#16 - 2008-02-10 11:51 PM - hamish -

Hi,

I have just installed 0.9.1 from
http://download.osgeo.org/qgis/mac/qgis-0.9.1.dmg.gz
and it still crashes. :-(

I am not sure if this package is William derived or not, or if that package is all-in-one and includes new frameworks or is somehow depending on what it has already found on the machine.

Also on the same machine is an older copy of GRASS 6.2.1 & William's "all frameworks" from whenever that was installed. I see:
Library/Frameworks/GDAL.framework/Versions/1.3

New crash log attached. The libjasper part is the same as quoted by Frank.

thanks,
Hamish

#17 - 2008-02-11 06:51 AM - William Kyngesburye

Replying to [comment:21 hamish]:

> *I have just installed 0.9.1 from*
> *http://download.osgeo.org/qgis/mac/qgis-0.9.1.dmg.gz*
> *and it still crashes. :-(*
>
> *I am not sure if this package is William derived or not, or if that package is all-in-one and includes new frameworks or is somehow depending on what it has already found on the machine.*

This is Tom's (Elertowski) all-in-one. GDAL is bundled inside the app as a Unix library, and any installed GDAL framework or lbrary will be ignored. I don't know which version of GDAL he used.

#18 - 2008-02-12 02:05 PM - Tom Elwertowski

- Status changed from Closed to Feedback

- Resolution deleted (wontfix)

Frank appears to have identified the problem. I had not realized until now that a copy of geotiff is embedded in the jasper lib used by all recent QGIS/Mac all-in-one builds.

In July 2006, I was informed that I was using an obsolete version of jasper and should use one from http://www.dimin.net/software/geojasper/. As a result of Frank's comment, I now see it contains embedded geotiff code with no option to configure as internal or external.

I am switching to the jasper distribution provided by Frank on the GDAL site. I suspect this will work. I am able to open the supplied tif file using William's [[UnixImageIO]] framework. The jasper distribution version William uses matches Frank's distribution s I suspect that when I switch and rebuild (which I won't get to for a day or two), the problem will be fixed.

#19 - 2008-02-12 02:06 PM - Tom Elwertowski

- Status changed from Feedback to Open

#20 - 2008-02-13 12:14 AM - hamish -

Just to report:

William's 0.9.1 Tiger binaries + latest frameworks fixes this for me.

I await Tom's new binaries, I'll test them when they arrive and then we can put this puppy to sleep.

Hamish

#21 - 2008-02-14 12:28 AM - hamish -

- Resolution set to fixed

- Status changed from Open to Closed

I have now tested Tom's brand new qgis-0.9.2rc1.dmg.gz.

Success!

good stuff guys, thanks. Closing the bug.

Hamish

#22 - 2009-08-22 12:54 AM - Anonymous

Milestone Version 0.9.2 deleted

Files

nz25_NZMG_gdal_IntPix_Pacbit_crop.tif	82.2 KB	2006-12-10	hamish_nospam-yahoo-com -
qgis_crash_osx.txt	23.1 KB	2006-12-10	hamish_nospam-yahoo-com -
qgis_crash_osx_31Jan2007.txt	26.6 KB	2007-01-31	hamish_nospam-yahoo-com -
qgis_crash_osx_11Feb2008.txt	27.7 KB	2008-02-10	hamish -