

QGIS Application - Bug report #5702

GRASS output is not georeferenced

2012-06-01 03:34 AM - Markus Metz

Status:	Closed	
Priority:	High	
Assignee:	Victor Olaya	
Category:	Processing/GRASS	
Affected QGIS version:	2.4.0	Regression?: No
Operating System:		Easy fix?: No
Pull Request or Patch supplied:		Resolution: not reproducible
Crashes QGIS or corrupts data:		Copied to github as #: 15227
Description		
<p>The GRASS backend uses a temporary location without CRS (xy location). The output is therefore not georeferenced: shapefiles in tempdata have no *.prj file and GeoTIFFs no embedded CRS info. With regard to vector output, the -e flag of v.out.ogr does not have any effect because the location is a xy location. This can be fixed by the user with "Save as..." or "Set layer CRS".</p> <p>It would be more comfortable if the output would already be georeferenced. This could be done by creating a second temporary location during import, using the CRS of the input data, i.e. [r.in.gdal v.in.ogr] location=<name_of_new_location>, then switch to this location and proceed as before. The second temporary location will have the CRS of the input data and will use this CRS for export.</p>		

History

#1 - 2012-06-01 05:06 AM - Paolo Cavallini

- Assignee set to Victor Olaya

#2 - 2012-06-02 03:21 AM - Paolo Cavallini

- Category set to 59

#3 - 2012-12-13 01:27 PM - Victor Olaya

- Status changed from Open to Resolved

Should be fixed now

#4 - 2012-12-16 07:16 AM - Giovanni Manghi

- Status changed from Resolved to Closed

seems solved to me, please reopen if necessary.

#5 - 2012-12-16 02:53 PM - Giovanni Manghi

- Priority changed from Normal to High

- Status changed from Closed to Reopened

at the end seems still true, for example with v.buffer as the .prj file is not created. May be other tools are affected.

#6 - 2012-12-16 03:18 PM - Victor Olaya

- Status changed from Reopened to Feedback

I have just tried v.buffer, and the result has a prj file. One question: does your input data has projection information?? I have noticed that there are problems with GRASS if you use data with no projection, and just using the "Set layer CRS" command in QGIS solves it. Maybe if the layer has no CRS, SEXTANTE should take the project CRS, assuming it has the same one.

#7 - 2012-12-16 03:55 PM - Giovanni Manghi

- File evora.zip added

Victor Olaya wrote:

I have just tried v.buffer, and the result has a prj file. One question: does your input data has projection information?? I have noticed that there are problems with GRASS if you use data with no projection, and just using the "Set layer CRS" command in QGIS solves it. Maybe if the layer has no CRS, SEXTANTE should take the project CRS, assuming it has the same one.

Hi Victor, I have tested with a couple of vectors, with a proper .prj file. Sample attached.

#8 - 2013-10-05 01:04 PM - Giovanni Manghi

- Status changed from Feedback to Open

still true on qgis 2.0.1

#9 - 2014-10-04 11:52 AM - Giovanni Manghi

- Project changed from 78 to QGIS Application
- Category deleted (59)
- Affected QGIS version set to 2.4.0
- Crashes QGIS or corrupts data set to No

#10 - 2014-10-04 11:53 AM - Giovanni Manghi

- Category set to Processing/GRASS

#11 - 2015-05-19 12:48 AM - Paolo Cavallini

More useful info from the mailing list. See thread here:

<http://lists.osgeo.org/pipermail/qgis-developer/2014-October/035153.html>===

The parameters are the same, so not really wrong. QGIS often does not recognize similar projections when the name does not fit.

The only thing missing is the +wgs84 parameter from EPSG:23030:

+proj=utm +zone=30 +ellps=intl +towgs84=-87,-98,-121,0,0,0,0 +units=m +no_defs

exactly, in fact there is a shift due to that

Those parameters are often ignored in shapefiles, and QGIS does not find the right

EPSG code without them.

do you know if there is a ticket about this? it is unclear to me where exactly the problem belongs:

GRASS is started with

```
g.proj -c proj4="+proj=utm +zone=32 +ellps=intl +towgs84=-87,-98,-121,0,0,0,0 +units=m +no_defs"
```

So the command line for GRASS is correct. From that point on, GRASS does not do any reprojections on the data, so GRASS is working ok. ED50 is not mentioned explicitly in the projection definition. I'm not sure if an EPSG-code can be given instead.

- the processing backend adding a (from QGIS point of view) malformed prj
- Processing itself not copying the right prj to the output
- QGIS failing to interpret valid parameters

The .prj that QGIS creates:

```
PROJCS["ED50_UTM_zone_32N",GEOGCS["GCS_European_1950",DATUM["D_European_1950",SPHEROID["International_1924",6378388,297]],PRIMEM["Greenwich",0],UNIT["Degree",0.017453292519943295]],PROJECTION["Transverse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",9],PARAMETER["scale_factor",0.9996],PARAMETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]
```

and the one from GRASS:

```
PROJCS["UTM_Zone_32_Northern_Hemisphere",GEOGCS["GCS_international",DATUM["D_unknown",SPHEROID["International_1924",6378388,297]],PRIMEM["Greenwich",0],UNIT["Degree",0.017453292519943295]],PROJECTION["Transverse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",9],PARAMETER["scale_factor",0.9996],PARAMETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["Meter",1]]
```

with false names, but correct parameters, and no towgs84 in both cases. It seems that GRASS does some WKT guessing on its own, instead of just taking that of the input file to the output file.

But QGIS also creates a .qpj file with TOWGS84 parameters and the EPSG code:

```
PROJCS["ED50 / UTM zone 32N",GEOGCS["ED50",DATUM["European_Datum_1950",SPHEROID["International_1924",6378388,297,AUTHORITY["EPSG","7022"]],TOWGS84[-87,-98,-121,0,0,0,0],AUTHORITY["EPSG","6230"]],PRIMEM["Greenwich",0,AUTHORITY["EPSG","8901"]],UNIT["degree",0.0174532925199433,AUTHORITY["EPSG","9122"]],AUTHORITY["EPSG","4230"]],PROJECTION["Transverse_Mercator"],PARAMETER["latitude_of_origin",0],PARAMETER["central_meridian",9],PARAMETER["scale_factor",0.9996],PARAMETER["false_easting",500000],PARAMETER["false_northing",0],UNIT["metre",1,AUTHORITY["EPSG","9001"]],AXIS["Easting",EAST],AXIS["Northing",NORTH],AUTHORITY["EPSG","23032"]],AUTHORITY["EPSG","23032"]]
```

This is for compatibility with shapefiles from ESRI, which never include TOWGS84 in the .prj

Maybe we should ask the processing dev to copy the .qpj from the input to the output file without further change. Or hand over the EPSG code on the GRASS command line unless a custom CRS is used.

I don't know if there is a ticket, and whether to address it to GRASS or processing. Perhaps to both.

#12 - 2015-06-01 10:12 AM - Giovanni Manghi

- Resolution set to fixed/implemented
- Status changed from Open to Closed

the original issue seems to not be anymore a problem (since a long to tell the truth) while the missing towgs84 parameters in the outputs is still an issue, see #11884

#13 - 2015-06-01 10:13 AM - Giovanni Manghi
- Resolution changed from fixed/implemented to not reproducible

Files			
evora.zip	229 KB	2012-12-16	Giovanni Manghi