

# Application: gvSIG desktop - gvSIG bugs #3954

## prj file with 3857 WKT not working

12/22/2015 02:17 PM - Andrea Antonello

<b>Status:</b> Closed	<b>% Done:</b> 0%
<b>Priority:</b> Normal	<b>Spent time:</b> 0.00 hour
<b>Assignee:</b>	
<b>Category:</b> CRS	
<b>Target version:</b> 2.3.0-2445 (rev. org.gvsig.desktop-2.0.152)	
<b>Severity:</b> Minor	<b>Add-on version:</b>
<b>gvSIG version:</b> 2.3.0	<b>Add-on build:</b>
<b>gvSIG build:</b> 2412	<b>Add-on resolve version:</b>
<b>Operative System:</b>	<b>Add-on resolve build:</b>
<b>Keywords:</b>	<b>Proyecto:</b>
<b>Has patch:</b>	<b>Hito:</b>
<b>Add-on name:</b> Unknown	

**Description**

I am having issues loading a shapefile with the attached prj file.

The content is a standard WKT of the projection 3857. Tested on the latest devel build downloaded yesterday (sorry, I am out of office and have no link to look the exact number).

The shapefile is not loaded and the status bar tells me that it doesn't recognise the SRS.

**Related issues:**

Related to Application: gvSIG desktop - gvSIG bugs # 4235: Error reprojecting...	<b>Closed</b>	<b>06/20/2016</b>
--	---------------	-------------------

### Associated revisions

#### Revision 493 - 01/27/2016 01:46 PM - Francisco Díaz Carsí

refs: #3954

- Parcheada la exportación de las proyecciones para que cuando se le pide que sea en formato de ESRI lo haga en WKT estandar.
- Capada la importación de las proyecciones a partir de la cadena WKT-ESRI si la librería no es capaz de Autoidentificar el código EPSG correspondiente.

### History

#### #1 - 12/22/2015 04:47 PM - Álvaro Anguix

- *gvSIG build set to 2412*
- *Assignee set to Francisco Díaz Carsí*

#### #2 - 12/28/2015 04:28 PM - Antonio Falciano

- *File gvSIG.log added*

Hi all,

I confirm the issue reported by Andrea at least in build 2413 win 64 bits. I attach the gvSIG.log.

#### #3 - 12/28/2015 05:13 PM - Antonio Falciano

It seems that also other prj files are not recognized.

#### #4 - 01/18/2016 04:49 PM - Antonio Falciano

##### Update (build 2414)

It's possible to add a layer defined in EPSG:3857 now, but there are two different related issues:

1. its geometries are not correctly reprojected on the fly (see #2739);
2. EPSG:3857 (but also other CRSs) is not identified in the Add layer window, near the "(reprojected on the fly" text, because the following error occurs

```
ERROR AWT-EventQueue-0 org.gvsig.crs.Crs - Can't autoidentifyEPSG.  
java.lang.RuntimeException: OGR Error: Unsupported SRS  
    at org.gdal.osr.osrJNI.SpatialReference_AutoIdentifyEPSG(Native Method)  
    at org.gdal.osr.SpatialReference.AutoIdentifyEPSG(SpatialReference.java:247)  
    at org.gvsig.crs.Crs.initFromSpatialReference(Crs.java:113)  
    at org.gvsig.crs.Crs.<init>(Crs.java:100)  
    [...]
```

#### #5 - 01/27/2016 12:16 PM - Joaquín del Cerro Murciano

- Target version set to 2.3.0-2447-final (rev. org.gvsig.desktop-2.0.153)

#### #6 - 01/27/2016 02:23 PM - Francisco Díaz Carsí

- Target version changed from 2.3.0-2447-final (rev. org.gvsig.desktop-2.0.153) to 2.3.0-2417 (rev. org.gvsig.desktop-2.0.123)

- Status changed from New to Fixed

No es directa la identificación del código EPSG a partir de una cadena WKT-ESRI que suele ser el contenido de los archivos .prj por lo que podemos no ser capaces de crear una proyección completa a partir de los datos suministrados por el WKT-ESRI.

Así pues, hemos decidido tomar una solución salomónica hasta que veamos una posibilidad viable de hacerlo con WKT-ESRI.

1º Cuando creamos nosotros un archivo .prj, el contenido será el del WKT estandar de la proyección (éste sí podemos leerlo sin problemas)

2º Cuando abrimos un archivo con un .prj asociado (esté en formato WKT estandar o en WKT-ESRI) si somos capaces de reconocer la "authority" de la proyección se la asignaremos a la capa, pero si no, no le asignamos ninguna proyección a la capa haciendo caso omiso del archivo prj. En este último caso deberá el usuario asignar la proyección a la capa como se hacía antes de poder leer archivos prj.

He probado el prj adjunto y sí he podido utilizarlo para asignar la proyección a la capa.

#### #7 - 01/29/2016 10:23 AM - Antonio Falciano

Hi all,

[gdalsrsinfo](#) could be our friend here... A great advantage of using GDAL/OGR libraries is that we can do all it does. So if a projection file (usually ESRI WKT, sometimes OGC WKT) is parsed by gdalsrsinfo correctly, it should be readable by gvSIG. But the AUTHORITY tag is available only in the full OGC WKT.

For instance:

```
gdalsrsinfo -o wkt_all non_working_3857.prj
```

OGC WKT :

```
PROJCS["WGS 84 / Pseudo-Mercator",
  GEOGCS["WGS 84",
    DATUM["World Geodetic System 1984",
      SPHEROID["WGS 84",6378137.0,298.257223563,
        AUTHORITY["EPSG","7030"]],
      AUTHORITY["EPSG","6326"]],
    PRIMEM["Greenwich",0.0,
      AUTHORITY["EPSG","8901"]],
    UNIT["degree",0.017453292519943295],
    AXIS["Geodetic longitude",EAST],
    AXIS["Geodetic latitude",NORTH],
    AUTHORITY["EPSG","4326"]],
  PROJECTION["Popular Visualisation Pseudo Mercator",
    AUTHORITY["EPSG","1024"]],
  PARAMETER["semi_minor",6378137.0],
  PARAMETER["latitude_of_origin",0.0],
  PARAMETER["central_meridian",0.0],
  PARAMETER["scale_factor",1.0],
  PARAMETER["false_easting",0.0],
  PARAMETER["false_northing",0.0],
  UNIT["m",1.0],
  AXIS["Easting",EAST],
  AXIS["Northing",NORTH],
  AUTHORITY["EPSG","3857"]]
```

OGC WKT (simple) :

```
PROJCS["WGS 84 / Pseudo-Mercator",
  GEOGCS["WGS 84",
    DATUM["World Geodetic System 1984",
      SPHEROID["WGS 84",6378137.0,298.257223563]],
    PRIMEM["Greenwich",0.0],
    UNIT["degree",0.017453292519943295]],
  PROJECTION["Popular Visualisation Pseudo Mercator"],
  PARAMETER["semi_minor",6378137.0],
  PARAMETER["latitude_of_origin",0.0],
  PARAMETER["central_meridian",0.0],
  PARAMETER["scale_factor",1.0],
  PARAMETER["false_easting",0.0],
  PARAMETER["false_northing",0.0],
  UNIT["m",1.0]]
```

OGC WKT (no CT) :

```
PROJCS["WGS 84 / Pseudo-Mercator",
  GEOGCS["WGS 84",
    DATUM["World Geodetic System 1984",
      SPHEROID["WGS 84",6378137.0,298.257223563]],
    PRIMEM["Greenwich",0.0],
    UNIT["degree",0.017453292519943295]],
  PROJECTION["Popular Visualisation Pseudo Mercator"],
  PARAMETER["semi_minor",6378137.0],
  PARAMETER["latitude_of_origin",0.0],
  PARAMETER["central_meridian",0.0],
  PARAMETER["scale_factor",1.0],
```

```
PARAMETER["false_easting",0.0],  
PARAMETER["false_northing",0.0],  
UNIT["m",1.0]]
```

ESRI WKT :

```
PROJCS["WGS_84_Pseudo_Mercator",  
GEOGCS["GCS_WGS_1984",  
DATUM["D_World Geodetic System 1984",  
SPHEROID["WGS_1984",6378137.0,298.257223563]],  
PRIMEM["Greenwich",0.0],  
UNIT["Degree",0.017453292519943295]],  
PROJECTION["Popular Visualisation Pseudo Mercator"],  
PARAMETER["semi_minor",6378137.0],  
PARAMETER["latitude_of_origin",0.0],  
PARAMETER["central_meridian",0.0],  
PARAMETER["scale_factor",1.0],  
PARAMETER["false_easting",0.0],  
PARAMETER["false_northing",0.0],  
UNIT["m",1.0]]
```

#### #8 - 01/29/2016 11:40 AM - Francisco Díaz Carsí

- File ESRI\_3857.prj added

Gracias Antonio,

pero el problema no está cuando viene un prj cuyo contenido es OGC-WKT,  
el problema está cuando en el prj está el ESRI-WKT.

El archivo que adjuntó Andrea era del primer tipo, OGC-WKT, pero era otro el problema que hacía que no se cargase correctamente (el parseo de un número creo recordar).

Adjunto un archivo de este tipo, ESRI\_3857.prj con el que podemos comprobar que gdalsrsinfo no es capaz de descubrir la AUTHORITY.  
Es con este tipo de prj con los que tenemos problemas para identificar la AUTHORITY y, por tanto, hemos decidido que si no podemos hacerlo, mejor no hacer caso al archivo para asignar la proyección.

#### #9 - 01/29/2016 01:15 PM - Antonio Falciano

Francisco Díaz wrote:

```
Gracias Antonio,  
pero el problema no está cuando viene un prj cuyo contenido es OGC-WKT,  
el problema está cuando en el prj está el ESRI-WKT.
```

Hi Francisco,

I'm agree with you... OGC WKT is easy to identify thanks to the AUTHORITY tag.

```
El archivo que adjuntó Andrea era del primer tipo, OGC-WKT, pero era otro el problema que hacía que no se cargase correctamente (el parseo de un número creo recordar).
```

Ok, the prj attached by Andrea (OGC WKT) is well recognized as EPSG:3857 in build 2417, but not reprojected on the fly because gvSIG isn't able to get the proj4 string from EPSG:3857 actually, so it's still not working.

*Adjunto un archivo de este tipo, ESRI\_3857.prj con el que podemos comprobar que gdalrsinfo no es capaz de descubrir la AUTHORITY.*

This is true for EPSG:3857 (ESRI WKT), because EPSG:3857 and EPSG:3395 (WGS 84 / World Mercator) have the same proj4 definition and their ESRI WKTs differ only for the name of the PROJCS. So it's not possible to identify the CRS univocally. Instead, EPSG:23030 (ESRI WKT) should be identified by gdalrsinfo without problems.

*Es con este tipo de prj con los que tenemos problemas para identificar la AUTHORITY y, por tanto, hemos decidido que si no podemos hacerlo, mejor no hacer caso al archivo para asignar la proyección.*

It's a first approximation that solves the issue only in part. The problem is to convert EPSG:3857 (and also the other CRSs) in proj4 strings now and gdalrsinfo is able to do it, without reinventing the wheel. ;-)

#### #10 - 01/29/2016 01:51 PM - Antonio Falciano

Antonio Falciano wrote:

*This is true for EPSG:3857 (ESRI WKT), because EPSG:3857 and EPSG:3395 (WGS 84 / World Mercator) ~~have the same proj4 definition~~ and their ESRI WKTs differ only for the name of the PROJCS. So it's not possible to identify the CRS univocally. Instead, EPSG:23030 (ESRI WKT) should be identified by gdalrsinfo without problems.*

EPSG:3857 and EPSG:3395 have different proj4 definition, sorry for the mistakes

#### #11 - 02/01/2016 02:49 PM - Álvaro Anguix

- Status changed from Fixed to Closed

#### #12 - 02/16/2016 10:41 AM - Antonio Falciano

- Target version changed from 2.3.0-2417 (rev. org.gvsig.desktop-2.0.123) to 2.3.0-2447-final (rev. org.gvsig.desktop-2.0.153)

- Status changed from Closed to New

The prj attached by Andrea has the main AUTHORITY tag, it's identified now in the "Add layer" dialog, but if I associate it to a shape, it's still not working because the proj4 string can't be retrieved:

```
WARN AWT-EventQueue-0 org.gvsig.crs.Crs - Can't get proj4 string from EPSG:3857
```

```
java.lang.RuntimeException: OGR Error: Unsupported SRS
```

```
at org.gdal.osr.osrJNI.SpatialReference_ExportToProj4(Native Method)
```

```
[...]
```

```
ERROR Thread-12 org.gvsig.crs.Crs - Can't get proj4 string.
```

```
org.gvsig.crs.CrsException: java.lang.Exception: The projection'Popular Visualisation Pseudo Mercator' is not a proj4 projection.
```

```
at org.gvsig.crs.Proj4.exportToProj4(Proj4.java:3241)
```

```
[...]
```

```
Caused by: java.lang.Exception: The projection'Popular Visualisation Pseudo Mercator' is not a proj4 projection.
```

```
... 10 more
```

```
ERROR Thread-12 org.gvsig.fmap.geom.jts.primitive.Envelope2D - Unable to reproject envelope with transf:
```

org.gvsig.crs.COperation@6b977201

[...]

The error is due to "Popular Visualisation Pseudo Mercator" alias that is not recognized as a proj4 projection. Maybe we need to add this alias in the *org.gvsig.crs.Proj4* class, like we did in #2624 and #2664.

**#13 - 02/24/2016 02:32 PM - Álvaro Anguix**

- Target version deleted (2.3.0-2447-final (rev. org.gvsig.desktop-2.0.153))

**#14 - 06/20/2016 12:08 PM - Joaquín del Cerro Murciano**

- Assignee deleted (Francisco Díaz Carsí)

**#15 - 07/21/2016 11:30 AM - Antonio Falciano**

Related to #4288 and #4290.

**#16 - 07/25/2016 07:18 PM - Álvaro Anguix**

- Related to gvSIG bugs #4235: Error reprojecting vector layers in 3857 added

**#17 - 09/15/2016 05:49 PM - Antonio Falciano**

- Target version set to 2.3.0-2445 (rev. org.gvsig.desktop-2.0.152)

- Status changed from New to Fixed

Fixed together with #4288 and #4290.

**#18 - 09/17/2016 05:57 PM - Antonio Falciano**

- Status changed from Fixed to Closed

**Files**

---

non_working_3857.prj	749 Bytes	12/22/2015	Andrea Antonello
gvSIG.log	386 KB	12/28/2015	Antonio Falciano
ESRI_3857.prj	547 Bytes	01/29/2016	Francisco Díaz Carsí