

Application: gvSIG desktop - gvSIG bugs #2738

EPSG:3857 Proj4 representation is not correct

07/29/2014 05:34 AM - Antonio Falciano

Status:	Closed	% Done:	0%
Priority:	Normal	Spent time:	0.00 hour
Assignee:	Joaquín del Cerro Murciano		
Category:	CRS		
Target version:			
Severity:	Major	Add-on version:	
gvSIG version:	2.1.0	Add-on build:	
gvSIG build:	2239	Add-on resolve version:	
Operative System:		Add-on resolve build:	
Keywords:	3857, web_mercator, proj4	Proyecto:	
Has patch:	Yes	Hito:	
Add-on name:			

Description

After #1371, #2306 and gvsig-jcrs:r246, the **EPSG:3857** Proj4 representation is now the following:

```
+proj=merc +lon_0=0.0 +lat_ts=0.0 +x_0=0.0 +y_0=0.0 +a=6378137.0 +b=6378137.0 +ellps=WGS84
```

while it should be something like this (skipping *+nadgrids*, *+wktext* and *+no_defs*, not used by the *org.gvsig.crs.Proj4* class):

```
+proj=merc +lon_0=0.0 +lat_ts=0.0 +x_0=0.0 +y_0=0.0 +k=1.0 +a=6378137 +b=6378137 +units=m
```

Instead, this is how the **USR:3857** CRS Proj.4 string is defined:

```
+proj=merc +lon_0=0.0 +k=1 +x_0=0 +y_0=0 +R=6378137.0
```

In detail, the missing scale factor (*+k=1.0*) is not a problem, while *+ellps=WGS84* should override the semiaxis definition.

Related issues:

Related to Application: gvSIG desktop - gvSIG bugs # 2739: Conversion between...

Closed

07/29/2014

History

#1 - 07/29/2014 06:04 AM - Álvaro Anguix

- Related to gvSIG bugs #2739: Conversion between EPSG:3857 and EPSG:4326 doesn't match added

#2 - 07/29/2014 06:05 AM - Álvaro Anguix

- Assignee set to Joaquín del Cerro Murciano

#3 - 08/26/2014 05:53 AM - Antonio Falciano

Being Web Mercator (EPSG:3857) a single projection, I think that we could simply hardcode its Proj4 definition. For instance, in the Proj4.class:

```
public String exportToProj4(CoordinateReferenceSystem crs) throws CrsException
```

```
{
  // a lot of stuff here...

  if (projectionAcronym[0].equals("merc"))
  {
    // other stuff here...

    if (projectionName.equalsIgnoreCase("Popular_Visualisation_Pseudo_Mercator"))
      isWmerc = true;
  }

  // other stuff here...

  if (isWmerc)
    strProj4 = "+proj=merc +lon_0=0.0 +lat_ts=0.0 +x_0=0.0 +y_0=0.0 +k=1.0 +R=6378137.0 +units=m ";
}
}
```

#4 - 09/01/2014 01:21 PM - Antonio Falciano

- File *Proj4.patch* added

I attach a patch that fixes this issue ...and also #2664 and #2596 (only partially).

The right Proj4 string of EPSG:3857 doesn't solve the other related issues (e.g. #2739) without the upgrade of libjni-proj4 (crsjniproj), because the conversion between EPSG:3857 and EPSG:4326 is actually not managed at all.

#5 - 09/05/2014 03:49 AM - Joaquín del Cerro Murciano

- Target version set to 2.1.0-2259-rc3

- Assignee changed from Joaquín del Cerro Murciano to Francisco Díaz Carsí

#6 - 09/05/2014 08:14 AM - Francisco Díaz Carsí

- Target version deleted (2.1.0-2259-rc3)

- Assignee changed from Francisco Díaz Carsí to Joaquín del Cerro Murciano

- Status changed from New to Fixed

Se ha aplicado el parche suministrado, y los cambios serán efectivos en el siguiente build de jcrs (2064)

#7 - 09/05/2014 10:17 AM - Antonio Falciano

Francisco, thank you very much for gvsig-jcrs:r263. It's only a little piece of the whole puzzle. ;)

#8 - 09/09/2014 03:45 AM - Álvaro Anguix

- Has patch set to Yes

#9 - 09/15/2014 04:00 AM - Antonio Falciano

- Status changed from Fixed to Closed

Files

Proj4.patch

10.5 KB

09/01/2014

Antonio Falciano