

Application: gvSIG desktop - gvSIG bugs #2827

Visualization issue with Mercator CRSs

09/19/2014 09:17 AM - Antonio Falciano

Status:	New	% Done:	0%
Priority:	Normal	Spent time:	0.00 hour
Assignee:			
Category:	CRS		
Target version:			
Severity:	Major	Add-on version:	
gvSIG version:	2.1.0	Add-on build:	
gvSIG build:	2247	Add-on resolve version:	
Operative System:		Add-on resolve build:	
Keywords:	3395, 3857, Mercator	Proyecto:	
Has patch:		Hito:	
Add-on name:	Unknown		

Description

As described in #2747#note-5, there's a visualization issue of this shp [1] (EPSG:4326) in a view defined in EPSG:3395 (WGS84/World Mercator) or EPSG:3857 (WGS84/Pseudo-Mercator). See for instance [2].

[1] http://www.mappinghacks.com/data/TM_WORLD_BORDERS-0.2.zip

[2] <https://redmine.gvsig.net/redmine/attachments/download/1010/EPSG3395.PNG>

History

#1 - 01/27/2015 02:32 PM - Álvaro Anguix

- Category set to CRS

#2 - 01/20/2016 01:38 PM - Álvaro Anguix

Ahora, con los cambios en CRS, hay una aproximación mejor a este de incongruencias. La capa en cuestión tiene un punto de fuga, pero en general la visualización es correcta.

#3 - 03/14/2016 07:09 PM - Antonio Falciano

Álvaro Anguix wrote:

Ahora, con los cambios en CRS, hay una aproximación mejor a este de incongruencias. La capa en cuestión tiene un punto de fuga, pero en general la visualización es correcta.

The visualization was right before according to the Mercator projection theory, because it "[...] distorts the size of objects as the latitude increases from the Equator to the poles, where the scale becomes infinite" (From [Wikipedia](#)). The issue that I haven't well described in this ticket is the way the visualization is managed. Because the linear distortions tends to infinity moving towards the poles, the shapes should be clipped in memory in order to limit their extent before their visualization, for instance using the "World" (EPSG:3391) area of use defined between 80°S and 84°N. In fact, using the "Clip by rectangle" geoprocess on the shape, thus limiting the N-S extent, then the visualization reaches the best compromise both in EPSG:3395 and EPSG:3857. Definitely this is not a code bug, but only a known defect (that affects also other GIS applications). I'd leave this ticket open just for future reference.

#4 - 03/14/2016 07:24 PM - Antonio Falciano

- File 3857.png added

More precisely, the best compromise in visualization consists into limiting the N-S extent between -85° and 85° . See the screenshot in attachment where the clipped shape is compared with the Mapnik OSM layer in EPSG:3857.

Files

3857.png	38.9 KB	03/14/2016	Antonio Falciano
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