

# Application: gvSIG desktop - gvSIG bugs #2827

## Visualization issue with Mercator CRSs

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

<b>Status:</b> New	<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>	
<b>Severity:</b> Major	<b>Add-on version:</b>
<b>gvSIG version:</b> 2.1.0	<b>Add-on build:</b>
<b>gvSIG build:</b> 2247	<b>Add-on resolve version:</b>
<b>Operative System:</b>	<b>Add-on resolve build:</b>
<b>Keywords:</b> 3395, 3857, Mercator	<b>Proyecto:</b>
<b>Has patch:</b>	<b>Hito:</b>
<b>Add-on name:</b> 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](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. Definitively 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  $-85^\circ$  and  $85^\circ$ . See the screenshot in attachment where the clipped shape is compared with the Mapnik OSM layer in EPSG:3857.

## Files

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