QGIS Application - Bug report #2567
Reprojection on the fly doesn't work if layers have different projections

2010-03-20 06:27 AM - sowelu -

Status:	Closed			
Priority:	Low			
Assignee:	nobody -			
Category:	Map Canvas			
Affected QGIS version:		**Regression?:**	No	
Operating System:	Linux	**Easy fix?:**	No	
Pull Request or Patch supplied:		**Resolution:**	invalid	
Crashes QGIS or corrupts data:		**Copied to github as #:**	12627	

Description

I have found a problem with vectors being misplaced if there are multiple layers with different projections. I would expect that if you have On The Fly Reprojection set and a valid CRS for each layer, then they should each be reprojected correctly onto the map.

Looking through the code it appears that the problem is that all layers use the same [[QgsRenderContext]] as this is a member of [[QqsMapRenderer]]. The [[QgsMapRenderer]] loops through each layer calling its draw() function and passing the same [[QgsRenderContext]] to each layer. The [[QgsCoordinateTransform]] is a member of the [[QgsRenderContext]] and so doesn't change as the layer list is iterated. As this contains the data and functions to reproject points then the same transform gets applied to each layer (not sure how it is defined, maybe that of the first layer?), when in fact each layer may require different co-ordinate transforms as they may have different [[SourceCRS]].

It may be better to store the [[QgsCoordinateTransform]] in the layer, rather than the [[QgsRenderContext]].

Attached are some files to illustrate. The [[RenderContextTest]].qgs project will set the map to AGD84 Zone 55 and load two shapefiles. The shapefiles each contain the same line with the same co-ordinates (ie the easting and northing numbers are the same) but they are in different projections - AGD84 Zone 55 and GDA94 Zone 55. With On The Fly reprojection turned off they overlay each other. With it turned on they **should** be shifted by 200m in a NE-SW direction (tested with [[MapInfo]]) - instead they remain the same (well almost, there may also be a problem with confusing AGD84 and AGD66 indicated in the debug messages).

I have compiled trunk (13071M) with Debug on and there does not appear to be a problem with invalid CRS.

This is the most I have examined the QGIS code, so please correct me if I have misunderstood it. Even if I have misunderstood the problem of not reprojecting remains.

Regards,

Roland

History

#1 - 2010-03-24 04:14 PM - sowelu -

- Resolution set to invalid

- Status changed from Open to Closed

ah, I see the [[QgsCoordinateTransform]] is updated in the [[QgsRenderContext]] before drawing each layer. I still have a problem with OTF reprojections between AGD84 and GDA94, but I will close this ticket as it is wrong and investigate further.

Roland

Files

RenderContextTest.zip	5.07 KB	2010-03-20	sowelu -