Application: gvSIG desktop - gvSIG bugs #3006
Gerroreferencing tool RMS seems not working properly

11/17/2014 09:07 AM - Manuel Madrid

Status:	Invalid	**% Done:**	0%
Priority:	Normal	**Spent time:**	0.00 hour
Assignee:			
Category:	Raster		
Target version:			
Severity:	Minor	**Add-on version:**	
gvSIG version:	2.1.0	**Add-on build:**	
gvSIG build:	2254	**Add-on resolve version:**	
Operative System:	Linux	**Add-on resolve build:**	
Keywords:		**Proyecto:**	
Has patch:		**Hito:**	
Add-on name:	Unknown		

Description

1. Start georeferencing and image with reference cartography and afin transformation options.
2. Place three control points.
3. Check the RMS value.
4. Now move one of the control points hundred of meters away from the original place.
5. Check that the RMS value keeps very low, which is not correct.

History

#1 - 11/17/2014 11:11 AM - Antonio Falciano

Hi Manuel,
an affine transformation in 2D is a roto-translation with scale variation or, alternatively, a polynomial transformation of the 1st order (n=1). So the minimum number of GCPs necessary to perform such transformation is: (n+1)(n+2)/2 = 3. When the GCPs are three, the RMSE should be always zero, because there aren't enough degrees of freedom in order to apply the least-squares method. Instead, if there are at least four GCPs, then the RMSE becomes significant and can be used in order to understand how well the transformation is performed.

#2 - 11/17/2014 04:26 PM - Manuel Madrid

- Status changed from New to Invalid

Hi Antonio,

You are totally right. Thank you so much for that wonderful explanation. I just closed the issue.

Best,
Manuel.