

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

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

<b>Status:</b>	Invalid	<b>% Done:</b>	0%
<b>Priority:</b>	Normal	<b>Spent time:</b>	0.00 hour
<b>Assignee:</b>			
<b>Category:</b>	Raster		
<b>Target version:</b>			
<b>Severity:</b>	Minor	<b>Add-on version:</b>	
<b>gvSIG version:</b>	2.1.0	<b>Add-on build:</b>	
<b>gvSIG build:</b>	2254	<b>Add-on resolve version:</b>	
<b>Operative System:</b>	Linux	<b>Add-on resolve build:</b>	
<b>Keywords:</b>		<b>Proyecto:</b>	
<b>Has patch:</b>		<b>Hito:</b>	
<b>Add-on name:</b>	Unknown		
<b>Description</b>			
<div>1. Start georeferencing and image with reference cartography and afin transformation options.</div> <div>2. Place three control points.</div> <div>3. Check the RMS value.</div> <div>4. Now move one of the control points hundred of meters away from the original place.</div> <div>5. Check that the RMS value keeps very low, which is not correct.</div>			

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.