

ISIS - Bug #4142

Fix errors, address occlusion issues and improve performance in NAIF DSK shape model implementation

2016-07-13 12:38 PM - Kris Becker

Status: In Progress	
Priority: High	
Assignee: Kris Becker	
Category: API	
Target version: 3.4.13 (FY16 R3 2016-08-31 Aug)	
Impact:	Software Version:
Description	
<p>The NAIF DSK shape model implementation in ISIS needs improvements and enhancements to fully support small bodies (and general uses). Some of the know issues are:</p> <ol style="list-style-type: none">1. There are occultation issues that need to be addressed concerning all DEM implementations in the ShapeModel class and supporting classes. There should be an additional method added that expressly checks for this when projecting image data that uses output driven orthorectification. This looks pretty straight forward for the DSK, and I think there is a rather easy way to check for this in the ISIS DEM shape model as well. I will investigate a comprehensive solution.2. There are general performance issues with the DSK implementation. I will investigate if improvements can be had through some optimizations (note the upcoming NAIF N66 release may also contain performance improvements).3. It has been reported (see https://isis.astrogeology.usgs.gov/IsisSupport/index.php/topic.3974.0.html) that erroneous photometric angles are computed in the DSK shape model when the image has been corrected. I will look into this problem while I am in the code.4. Investigate shared access to the same DSK for multiple images.	
Related issues:	
Related to ISIS - Bug #2224: Map projection occlusion bug	Closed

History

#1 - 2016-07-13 12:51 PM - Kris Becker

- Related to Bug #2224: Map projection occlusion bug added

#2 - 2016-07-14 10:30 AM - Kris Becker

- Status changed from New to In Progress