

Silo - Feature # 566: Add DBOPT_GHOST_ZONES for quadmesh

Status:	New	Priority:	Normal
Author:	Mark Miller	Category:	
Created:	01/25/2011	Assigned to:	
Updated:	01/25/2011	Due date:	
Impact:	3 - Medium		
Expected Use:	3 - Occasional		
OS:	All		
Support Group:	Any		
Subject:	Add DBOPT_GHOST_ZONES for quadmesh		
Description:	<p>Andreas Schafer would like this for silo (and VisIt).</p> <p>I think this would be less than 1/2-days work on Silo library and Silo plugin in VisIt. We'd add a DBOPT_GHOST_CELL_ARRAY option for DBPutQuadmesh. It would be an array of chars of the same size as mesh. Non-zero value for a cell indicates its a ghost while zero value indicates its a real cell.</p> <p>In the Silo plugin for VisIt, when we read a quadmesh object, we'd see if this optional array exists and, if so, ghost the mesh according to it instead of the 'normal' way. The plugin already does ghosting based on hi/lo offsets (around the extreme boundaries of a quadmesh). All this would do is add explicit ghosting. I think as long as the ghosting pattern you needed for a particular quadmesh did not result in (a lot of) internal holes (your 2D example had no actual holes in any of the pieces), then most of the issues with 'internal faces' due to ghosting don't really crop up.</p> <p>Note, there is a slight gotcha getting browser to display this data correctly. It doesn't know how to compute the array size properly.</p> <p>Hank thinks this might have other useful application as well.</p>		

History
