VisIt - Feature # 1238: Add overlap detection to CSG discretization

Status:	Pending	**Priority:**	Normal
Author:	Mark Miller	**Category:**	
Created:	11/13/2012	**Assigned to:**	
Updated:	11/28/2012	**Due date:**	
Impact:	3 - Medium		
Expected Use:	3 - Occasional		
OS:	All		
Support Group:	Any		
Subject:	Add overlap detection to CSG discretization		
Description:	Scott McKinely requested this... We should add some ability to detect overlapping CSG regions. Not quite sure how to go about it but I think in the subdivision based algorithm we could use the fact that continued subdvision is failing to _resolve_ to a single region. >Our # 1 way to find overlap is when we create a mesh and we double check all zones to see who owns a point. However, it is really hard to get a good scale down for this check. As an example, I am making a room that is 5 meters by 5 meters by 5 meters. However, the window is about 1 cm thick. So we would roughly need a mesh at the 1cm level to find an overlap. However, I could easily see the problem in VisIt with the CSG format used. So adding this feature to VisIt would be wonderful since this is one of the biggest places where mistakes are made when setting up a Mobte Carlo input deck.		

History

11/28/2012 12:14 pm - Eric Brugger

- Status changed from New to Pending