
Subject: Visibility explanations, otherwise known as VIS explanations

Posted by [Anonymous](#) on Tue, 24 Dec 2002 00:38:00 GMT

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Alright, I promised that I'd explain why the visibility system isn't needed in your maps, but is just an optional thin you may decide to do. According to a friend of mine in Westwood, this is the total purpose of the visibility system, also known as VIS. quote: The heightfield itself will still occlude models, but the interior/exterior transition of buildings and other such instance objects are not occluded unless the vis is run. Unfortunately, the models are built in such a way that they never really vis out effectively, as you can see the interiors through doors and other portals (glass, etc.), regardless of whether the door is open or not. This is why I say vis is not absolutely necessary, it does very little occlusion. It was built for making the terrain mesh in Max and importing it, rather than using the heightfield system (which didn't exist until after Renegade shipped). In other words, he's saying that the visibility system isn't doing a semi-decent job at making objects become invisible when they're out of your view. Ways to solve this, however, are actually simple and take a bit of time on your part. When you construct your VIS sectors, I suggest that you take every mesh on the map that is able to be walked on and select them all at once. Hold shift, drag the new clones of them down about two or three meters, then right click and hide everything that is unselected. Take the sectors and detach medium-sized polygons from them, make sure that the polygons are attached to each other and not across the map from each other. Name each one VIS(Numbers). You'll usually end up with about 100-300 VIS sectors after doing that. Take each mesh and check hide and VIS in the W3D Tools section of Max. Now, select each mesh named VIS and click File > Save Selected. Save it as C&C_YourMapName_Emis. Export it to your map folder's Levels folder, exporting it as anything that ends with _emis.w3d. Open your map in LevelEdit, then make a new temporary preset in the Terrain section. Call it anything that ends with _emis. Make it, you won't see it appear but it will be there. Auto-generate VIS. Set it to a granularity of eight. It should finish within 20-60 minutes, so just do something else while it chugs away. After it finishes, look around your map for a bit just for an initial run-through to see if anything is wrong. After doing that, click on two buttons at top. First, the display VIS sector button, showing where your sectors are located when you run over them. It shows the boundaries of them and makes it easier to know where to place a manual correction point. Two, click the wireframe button. People may wonder why I would use wireframe to do my VIS optimizations... But think about it; you can tell exactly where to place a point and where not to because you can see through objects now. That means you can tell if there's a mountain behind that GDI Weapons Factory, and if there isn't, then leave it alone! The problem with all maps is that the VIS isn't occluding anything well enough to make your FPS increase... And this is why. So, start your trek around your map in wireframe mode. If you're unsure if something should be invisible or not, hit F9 while running around and it will toggle between wireframe and non-wireframe. It should be self-explanatory from here on. Go behind mountains and such, if anything you see goes invisible, that's good! If it doesn't, that's bad... But, if you see something invisible in plain sight, then make sure to place a manual correction point. Finally, manual correction points are placed by pressing ctrl+`, the button next to the number one key. [December 23, 2002, 13:25: Message edited by: aircraftkiller2001]
