
Subject: Re: DXF and Face3D

Posted by [Karl Schultz](#) on Wed, 30 Aug 2006 15:49:47 GMT

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On Wed, 30 Aug 2006 07:03:42 -0700, Thomas Launey wrote:

```
> Hello,
> I am trying to smooth all the mesh (Face3d) objects in a DXF file using
> the code below.
> It fails however when I try to put the modified vertices back into the
> DXF object with the message:
> IDL> test_IDLffDXF
> % Loaded DLM: DXF.
> % IDLFFDXF:UTENTITY: DXF error: FACE3D connectivity list must contain
> only 4-vertex polygons.
> % Execution halted at: TEST_IDLFFDXF    18 H:\test_idlffdx.pro
>
> Pro test_IDLffDXF
> DXF_file=dialog_pickfile(filter="*.DXF", /must_exist)
> If N_elements(DXF_file) LT 1 then return
> oDXF = OBJ_NEW('IDLffDXF')
> status = oDXF->Read(DXF_file)
> DXFTypes = oDXF->GetContents()
> ;*** get all face3D entities
> DXFsurface = oDXF->GetEntity(DXFTypes[where(DXFTypes EQ 10)])
> vertices = DXFsurface.vertices
> connectivity = DXFsurface.connectivity
> N_object=n_elements(vertices)
> For i=0, N_object-1 do Begin
>   vert=MESH_SMOOTH (*vertices[i], *connectivity[i])
>   *((DXFsurface.vertices)[i])=vert
> EndFor
> oDXF->PutEntity,DXFsurface
> End
>
> It seems that all I am doing is to move around the vertices, without
> changing the number of faces. A post by K. Schultz from June 2004
> suggests to change the type to 9 (polygon) but also warn of potential
> problems with running vertices through the tessellator.
> Any help would be greatly appreciated :-)
```

> Thanks,
> Thomas

You should probably go ahead and use the type 9 entity. I fixed the problem that you mentioned that I mentioned in IDL 6.2.

I think that the MESH_SMOOTH algorithm ends up treating your mesh as a triangle mesh, and so outputs it as such.

If you supply a vertex list and a connectivity list to a type 9 DXF entity, IDL will examine the connectivity list and NOT call the tessellator if all polygons in the mesh are triangles (as of IDL 6.2).

Karl

Subject: Re: DXF and Face3D

Posted by [Thomas Launey](#) on Thu, 31 Aug 2006 05:24:25 GMT

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Dear Karl,

Thank you very much for the update on 6.2. Unfortunately I am still on 6.1, with no prospect of upgrade. Any suggestion for fixing the problem on 6.1?

Thanks

Thomas

Karl Schultz wrote:

>

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> problem that you mentioned that I mentioned in IDL 6.2.

>

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> triangle mesh, and so outputs it as such.

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> If you supply a vertex list and a connectivity list to a type 9 DXF
> entity, IDL will examine the connectivity list and NOT call the tessellator
> if all polygons in the mesh are triangles (as of IDL 6.2).

>

> Karl
