Collada2POD

User Manual

Filename	:	Collada2POD.User Manual.1.11f.External.doc
Version	:	1.11f External Issue (Package: POWERVR SDK 2.07.27.0428)
Issue Date	:	26 Feb 2010
Author	:	POWERVR

Contents

1. Introduction

Collada2POD takes a COLLADA file (.dae) and converts it to a POD file (.pod). If the COLLADA file contains any GLSL profiles, they will be converted to the .PFX file format.

The COLLADA format was created by the Khronos Group to establish an open standard Digital Asset schema for interactive 3D applications. Its name is an abbreviation of the approach that was taken during its design, as it was a COLLAborative Design Activity.

1.1. Known limitations

- Collada2POD only fully supports meshes that are constructed from triangles and polylists.
- Animations must not be represented using curves in the COLLADA file (only linear animation is currently supported).
- Skinned animations are not always exported correctly.

2. Collada2POD Command-Line

2.1. Parameters

The command-line version of Collada2POD supports the majority of options available in the GUI version. For a list of all command-line options type:

```
Collada2POD /?
```

To use Collada2POD with default export options use the following:

```
Collada2POD –i=<input filename> -o=<output filename> -cs<=ogl,=d3d>
```

Note:

- The output filename must end in either .pod or .h. The file extension is used to determine the type of POD file that is required.
- The -**cs** flag is optional. By default, Collada2POD converts the scene to the OpenGL coordinate system (**-cs=ogl**). The **-cs** flag allows you to override this. For example, the scene can be converted to the Direct3D coordinate system by specifying the **-cs=d3d** flag.
- If the output filename is not specified, the input filename will be used (but with the extension replaced with ".pod").

2.2. Example

```
Collada2POD –i=Duck.dae –o=Duck.pod
```

3. Collada2POD GUI

3.1. The GUI

The Collada2POD GUI contains three tabs that split functionality into groups. At the bottom of the application there are two text fields that allow you to specify the COLLADA file you wish to convert and the name you want to give to the new POD file (which defaults to the input file name if an output file name is not specified). When both fields are set, clicking the “Convert” button will start the conversion.

Figure 1 The application bottom

3.2. Options Tab

When the application is first launched you will be greeted with the export options, as shown in Figure 2.

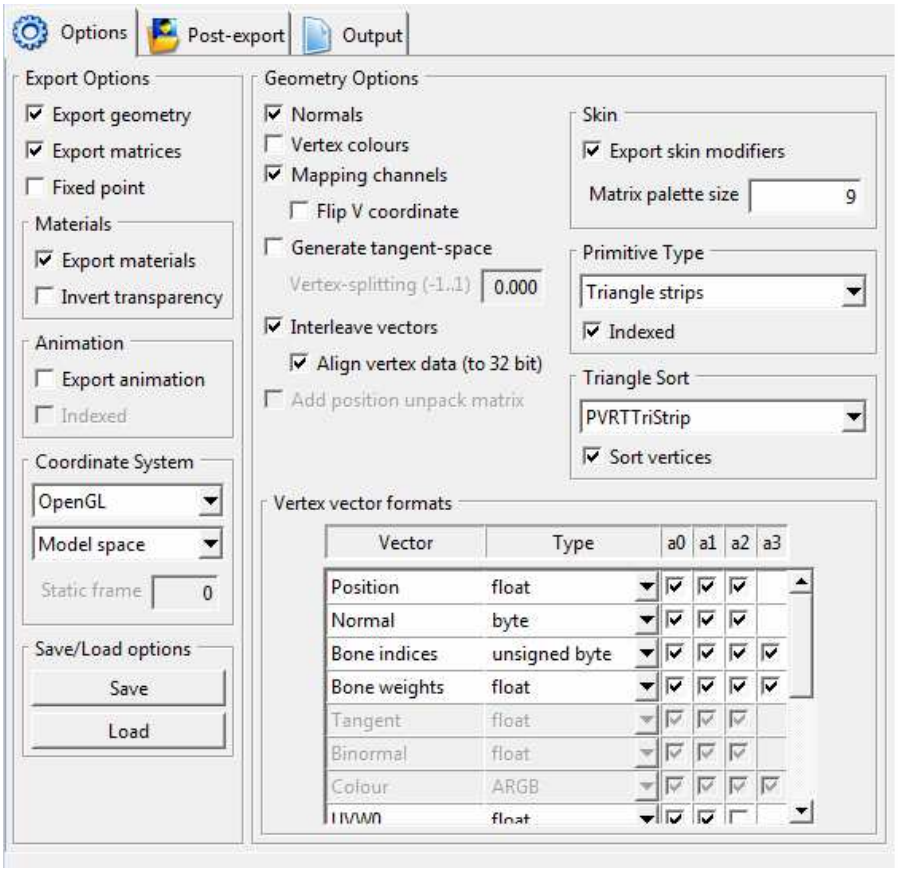

Figure 2 The Collada2POD GUI

3.2.1. Export Options

- Export Geometry – When ticked, geometry will be exported.
- Export matrices – When ticked, transformations will be exported as matrices.
- Fixed Point – When ticked, the data will be exported in fixed point format.

Export Options – Materials

- Export Material – When ticked, the materials will be exported.
- Invert transparency – Invert the transparency value.

Export Options – Animation

- Export animation – When ticked, the animation data will be exported.
- Indexed – When ticked, the animation data will be indexed to save memory.

Export Options – Coordinate system

- The first drop down list allows you to select the coordinate system that you wish the data to be exported to.
- The second drop down list allows you to select if the scene will be exported in Model or World space.

3.2.2. Geometry Options

- Normals – When ticked, the normals will be exported.
- Vertex colours – When ticked, the vertex colours will be exported.
- Mapping channels – When ticked, the texture mapping channels will be exported.
- Flip V – Flip the v component of the texture co-ordinates.
- Generate tangent-space – When ticked, tangents and binormals will be generated.
- Interleave vectors – When ticked, the data will be exported interleaved.
- Align vertex data – When ticked, the interleaved data will be aligned to the mentioned byte boundary.
- Add position unpack matrix – When ticked, scale and offset to improve accuracy of 8 bit and 16 bit vertex data.

Geometry Options – Skin

- Export skin modifiers – When ticked, the skinning data will be exported.
- Max simultaneous matrices – This value determines the maximum number of bone matrices that can affect a mesh. If the mesh has more bone matrices than the maximum value, the mesh will be split.

Geometry Options – Primitive type

- The drop down menu specifies the primitive type that you want to export the data to, e.g. Triangle Lists.
- Indexed – If ticked then the data will be exported indexed.

Geometry Options – Triangle sorting method

- The drop down menu specifies the triangle-indices sorting method you wish to use, e.g. PVRTTriStrip.
- Sort Vertices – When ticked, the vertices will be sorted to improve performance.

Geometry Options – Vertex vector formats

The ‘Vertex vector formats’ option allows you to customise the vertex data that is output. It consists of 6 columns.

- ‘Vector’, which provides a descriptive name for the vertex data.

- A drop down box that allows you to define the data type. Uses for this can include changing all the float types to fixed16.16 when exporting fixed point data or changing the bone weights to D3DCOLOR when exporting for Directx.
- The final 4 columns represent the components of the data that you wish to export. For example if you only wanted to export the UV part of the UVW data, then only the first two columns should be ticked.

3.3. Post-Export Tab

The second tab is the post-export options tab, which is shown in Figure 3. The defined options are executed on completion of the export.

3.3.1. PVRShaman

The PVRShaman post export option allows you to define the path to PVRShaman. If the “Open in PVRShaman” box is ticked, the .pod file will be opened in PVRShaman once the export has completed.

3.3.2. Post-export Command-Line

The post-export command-line options allow you to run an application by defining its working directory, the command (i.e. the .exe) and its command-line arguments.

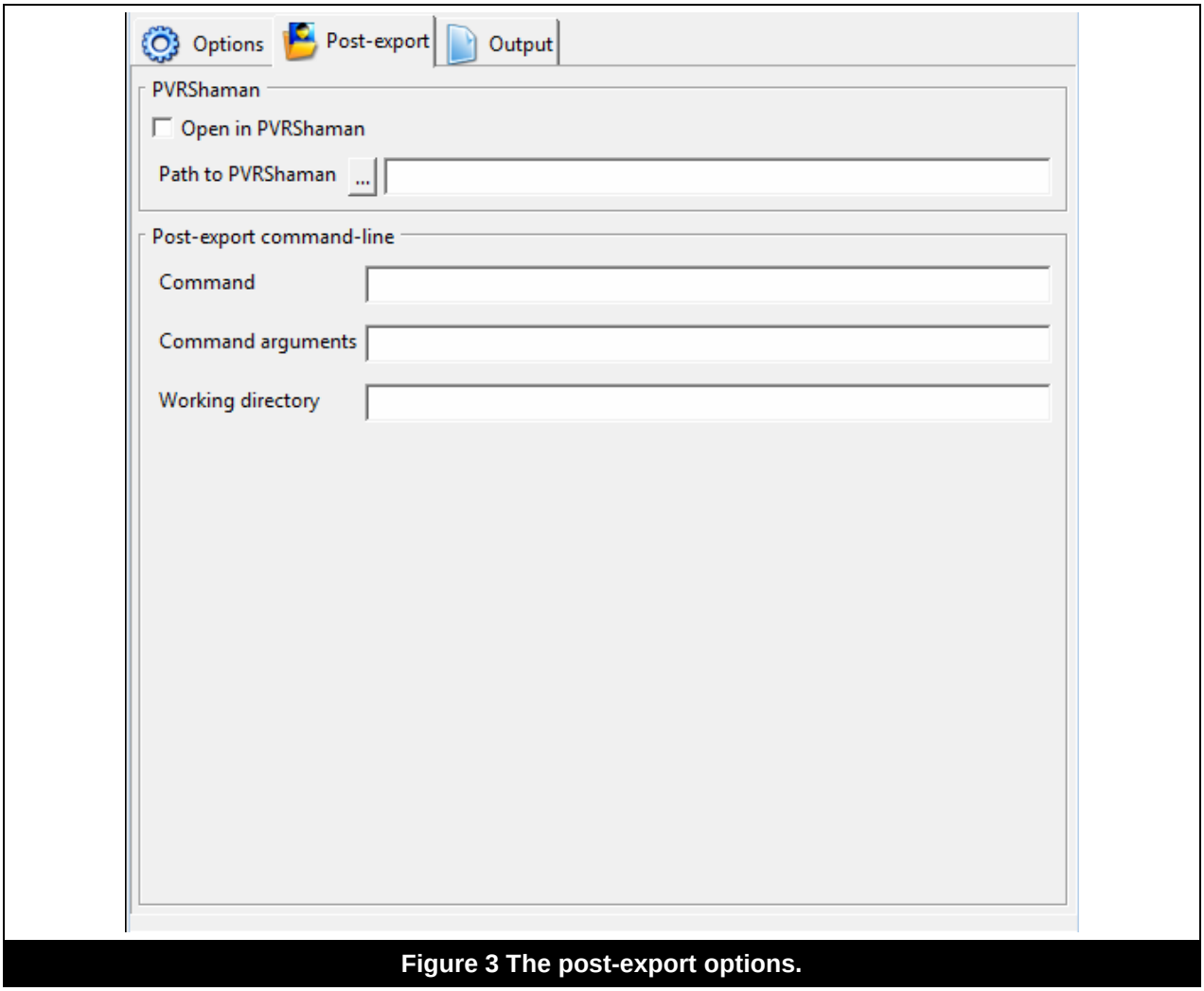

Figure 3 The post-export options.

3.4. Output Tab

The output tab shown in Figure 4 displays the exports output; this is where any error messages or warnings will be displayed.

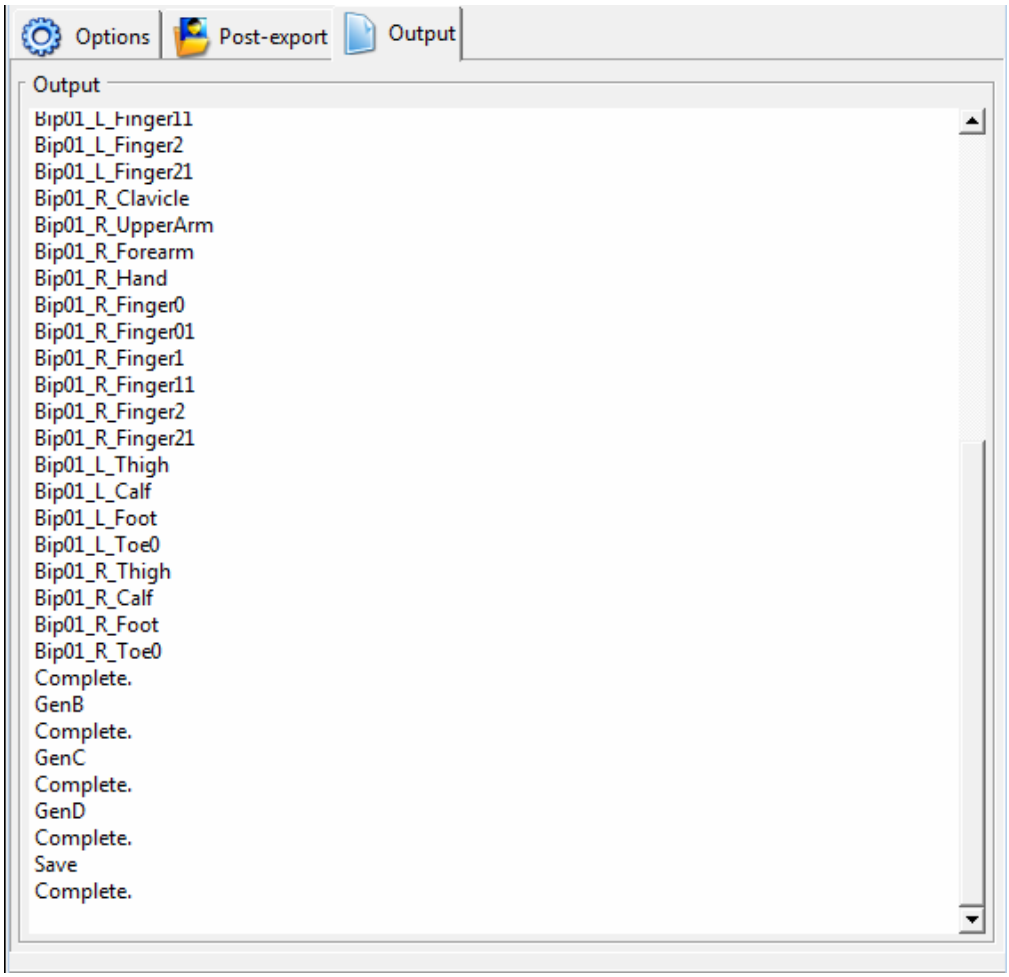

Figure 4 The Output tab.