

Rapid Prototyping Service

.. Maya VRML Output

AMS Supplementary Service Guide

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Notes for NURBS Models

To increase the quality of VRML output of NURBS models, add Isoparms to the object, particularly in areas of high curvature.

1. Right-click on the model and select 'Isoparms.'
2. Hold 'shift,' left-click and drag from existing isoparms (highlighted in cyan) to create new isoparms (in yellow). Do this for both U and V directions.
3. While the new isoparms are still yellow, go to the 'Edit NURBS' menu and choose 'Insert Isoparms.'

Manually convert the NURBS model to polygons to control tessellation.

1. Select the parts to convert to polygons.
2. Go to the 'Modify' menu, select 'convert' and choose 'NURBS to polygons.'
3. In the options dialogue box, set 'Type' to 'quads,' 'Tessellation Method' to 'count,' and set a number for count (will depend on model).
4. The convert to polygons function duplicates the selected parts, so go back and remove all NURBS components.

Notes on Boolean Operations

Polygon models built using Boolean operations will not print until converted to polygonal surfaces.

1. Select any polygon components built with Boolean operations.
2. Go to the 'Modify' menu, 'Convert', and then choose 'Displacement to Polygons.'

Checking Surface Normals

Check for proper orientation of surface normals.

1. Select all Surfaces (Polygon or NURBS).
2. Go to the 'Display' menu and choose either 'NURBS components' or 'Polygon components' and select 'Normals.'
3. All lines indicating normals should point outside and not towards the inside of the model.

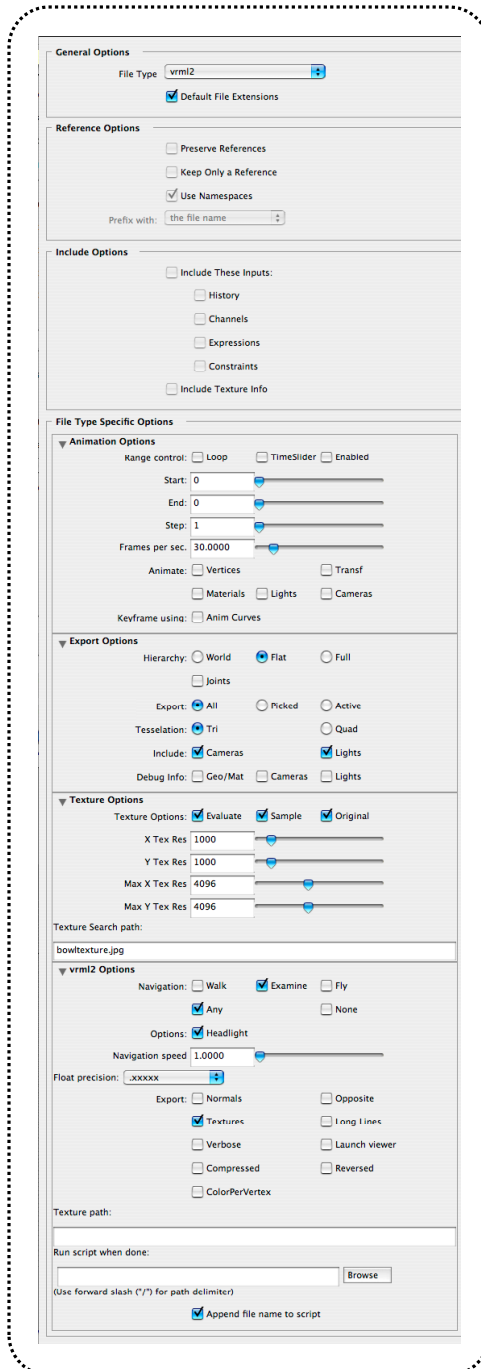
Exporting VRML Files

To export VRML files the built-in plug-in must first be activated and loaded.

1. Go to the 'Window' menu select 'Settings/Preference' and choose 'Plug-in Manager.'
2. Check the 'loaded' and 'auto load' check boxes next to the 'vrml2export.lib' plug-in.

Export VRML files using the default settings, then convert the attached texture file into JPEG file format (if applicable). The VRML file will require editing to reference the new JPEG texture file.

1. Go to the 'File' menu and choose 'Export All' or 'Export Selection,' select 'vrml2' and save the file.
2. Open the VRML2 file (.wrl) using 'Text Edit' or 'Notepad' and do a 'Find and Replace'. Replace the original texture file paths with just the texture file names and extensions (no path).
3. Place the original texture files in the same folder as the .wrl (should be jpeg).



Maya VRML Output Settings Window