General How-To VRML to MAX Conversion

There are several key things to consider about VRML when constructing your MAX file:

Polygons

You want to make your file able to be rendered in real time on an average users machine.A maximum of 3000 in your scene is a good limit. You can get creative with the number of polygons by implementing Anchors and LOD's .

Animations

You can do any type of transform or "morphing" animation with the 2.0 exporter. Transform animation (translation, rotation and scale) tend to be lighter on files. "Morphing" or Coordinate Interpolation produces larger files because each vertex must be accounted for. Use sparingly.

Materials

You add materials as you normally would in MAX. "Wire" materials will export as Indexed Line Sets.

Texture Maps

VRML will accept .gifs and .jpegs as texture maps. Texture maps also tend to produce large files. Use sparingly.

Lighting

MAX will export lighting to VRML.

Cameras

At least one camera in your file is necessary. Create an "entry view" for every file so that your models will load in view and you wont have to hunt around for them. Cameras are exported as Viewpoints in VRML. The name you give the camera is what your Viewpoint will be called in the VRML file. Users can navigate through viewpoints in a file, moving from one to another.

The basic steps for creating a VRML file in Max:

* Create your geometry
* Assign Materials, Lighting and Texture Maps and Cameras
* Make your animations
* Under "Helpers" on the "Create" Command Panel choose one of the VRML Helper sections
* Place your VRML nodes in the scene and link them appropriately
* Select File/Export
* Export your file as a ".wrl" file
* Configure the export dialogue box and press OK.
* Check out your file in your VRML browser
* You might want to open the file in your text editor at this point as well. You can look at the code, edit and save it and look at it again in the browser. You will often be going back and forth between the browser, the text editor and MAX.

Exporter Dialogue Box:

* Output Language- Select VRML 2.0, 1.0 or VRBL depending on your scene
* Initial View- Lists all cameras in the scene with the initial view on top.
* Generate:
  + Normals - Use if you need normal info for your file. It can make a file signifigantly larger.
  + Fields- Arranges layout of Fields in VRML file
  + Indentation- Creates indentation in the layout of the VRML file
  + Primitives- exports the cone, sphere, cube and cylinder as VRML primitives. Using this feature when you have primitives in your scene can cut down its size considerably.
* VRML 2.0 Options
  + Initial Navigation Info: Select the Nav Info you'd like the world to begin with.
  + Initial Background: Select the Background you'd like the world to begin with.
  + Initial Fog: Select the Fog you'd like the world to begin with. (This node is not supported by any browsers yet)
* Coordinate Interpolators:
  + Transform Controllers-
    - Once per Animation Frame - assigns a key value for each frame
    - Custom - Choose the frames per second. This allows you to reduce the number of key values (and the file size)
  + Coordinate Interpolators-
    - Once per Animation Frame - assigns a key value for each frame
    - Custom - Choose the frames per second. This allows you to reduce the number of key values (and the file size). Coordinate Interpolators can create huge files. Experiment here to see if a lower FPS setting will lower your file size while keeping your animation intact.
  + Up Direction
    - Z-axis - The MAX convention
    - Y-axis - The VRML convention. This is usually the choice you want.
* Digits of precision- How precise do you want the file to be? Higher digits of precision can mean much larger files because it effects every value in the geometry. Four digits is a good number
* Bimap URL prefix Directs the browser to the directory with your textures.