Storm3D Tool

The *Storm3D Tool* or also sometimes called *Storm3D utility* is a piece of software used to manipulate SOD models, as they are used by Star Trek: Armada. It directly uses the Storm3D Engine to display the models loaded.

Setting Storm3D Tool Up

You can get the *Storm3D Tool* from here: Armada Files. It was meant to be used with versions 1.1 and 1.2 of *Star Trek: Armada*. (See also Hashes of the Different Versions.) But in reality only version 1.2 has any relevance today. The *Storm3D Tool.exe* is placed in the root folder of the *Star Trek: Armada* installation folder and started from there.

It works well with the original CD Version of *Star Trek: Armada*, but not so much with an (unaltered) GOG version of the game. Reason for that are the modifications GOG made to the game in form of some DLLs. They make *Storm3D Tool* crash upon loading. You can in principle get the *Storm3D Tool* to work with the GOG version by removing all unneeded files from the GOG folder (make backups of it, before you do so!). If put that to the extreme, you can create a stand-alone variation of it, by only keeping the following files/folders:

- *SOD*,
- *Sprites*,
- *Textures* and
- *Storm3D Tool.exe*.

Placing mod files into those directories is necessary to modify SODs with *Storm3D Tool*. But the rest of the *Star Trek: Armada* installation is not required for *Storm3D Tool* to work then.

If created in this fashion, it will also start on a modern system.

Usage

Keys

There are a number of things you can do with the *Storm3D Tool* directly. The following keys may be useful:

Key	Effect
F1	Displays the different keys and their effects. The descriptions are, however a bit spartan.
F2	Switches between advanced mode and preview mode. The latter is the default mode.
F5	Increases selection brush size when in mesh mode.
F6	Decreases selection brush when in mesh mode.
F7	Allows to mark the mesh of a LOD node, implicitly switching from node mode to mesh mode.

Key	Effect
F8	Opens a loading dialog to select an SOD file for use with *Storm3D Tool*. This does not yet place the model anywhere.
F9	Opens up a save dialog to save the currently selected object to an SOD file.
PG Down	Selects the next element. Depending on the mode that can be an entire model (when in object mode), a node (when in node mode) or a mesh LOD (when in mesh mode).
PG Up	Selects the previous element. Depending on the mode that can be an entire model (when in object mode), a node (when in node mode) or a mesh LOD (when in mesh mode).
A	Zooms out from model (when in object mode) or node (when in node mode) or mesh (when in mesh mode).
Z	Zooms in from model (when in object mode) or node (when in node mode) or mesh (when in mesh mode).
B	Plays the build/construction animation, that is also used when a ship is built in a yard, or a station by a Constructor.
D	Displays the indicators for low crew (damage patches), borg assimilation and emitters (life support or engines down).
O	Switches ob object mode, when in advanced mode.
N	Switches to node mode, when in advanced mode.
M	Switches to mesh mode, when in advanced mode.
SPACE	Place a loaded SOD model near the mouse pointer. Note: This also considers the mouse pointer location if the mouse pointer is not inside the window of *Storm3D Tool*. Meaning, your newly placed model might not be visible initially.
DEL	Removes the currently selected object (regardless whether you are in node or mesh mode, it will always remove the entire selected **model**!).
W	Switch display to displaying the mesh (no textures).
Left Mouse Button	Turn the selected element (in object mode, it will be the entire model, in node mode it will be the node).
Right Mouse Button	Moves the object in-plain (in object mode, it will be the entire model, in node mode it will be the node).
Middle Mouse Button	Moves the object perpendicular to the viewing plain (in object mode, it will be the entire model, in node mode it will be the node).
L	Places a light source. Without a light source, the non-glowing elements of the models will be black, as they cannot reflect any light that it not there. By default there is always one light source placed, but that can be deleted, like any other element.
C	By default the color of placed light sources and units is chosen randomly. This allows to set the color of a model's glowing parts or of a light source.
S	Spin an object: When holding S while spinning an object with the Left Mouse Button, you can make an object continue spinning. Pressing S makes the turning animation stop or continue.
H	Continuously hides and shows the object currently selected. Pressing H again stops the animation. This is similar to the effect used to indicate a unit becoming cloaked or decloaked.
P	If a unit has an animation, it will be restarted.
-	Switches to a different LOD.
+	Switches to a different LOD.

Key	Effect
T	When having selected a mesh in mesh mode, this allows for selecting a different texture for that particular mesh. As no UV alignment can be done with *Storm3D Tool*, this is probably of limited use.

Modes

Modes can be switched by pressing F2, to activate advanced mode (or preview mode), or keys O, N and M for object, node or mesh mode.

Preview Mode

Basically the same as the below described Object Mode just without the possibility to switch to Node Mode or Mesh Mode and with less information displayed.

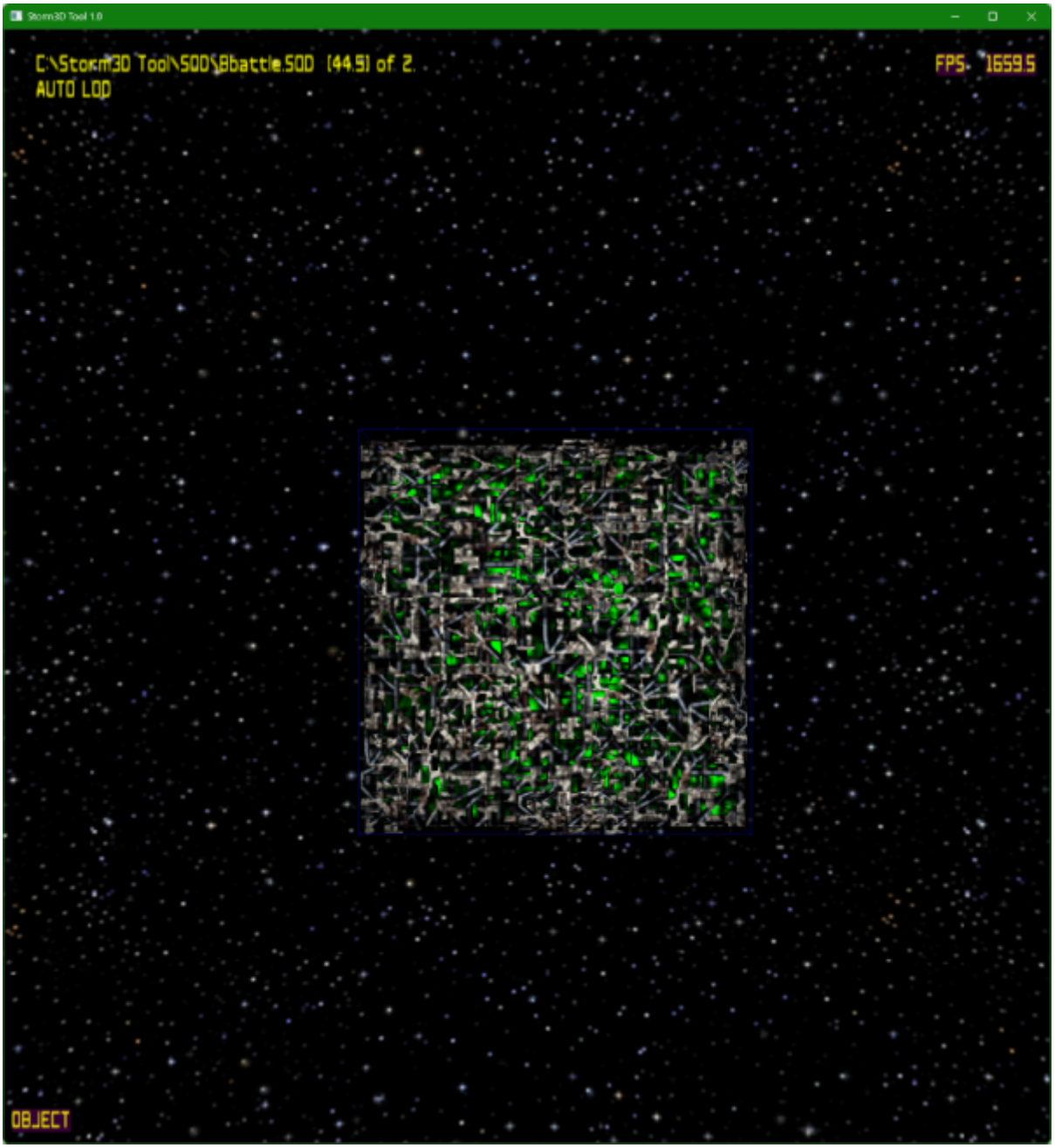
Advanced Mode

When this mode is active, the other (following) modes can be used. If you switch from advanced to preview mode with F2, then these modes will be turned off as well and you revert to something similar as Object Mode.

Object Mode

This is basically the same as preview mode, but displays some more information. If advanced mode is not active, *Storm3D Tool* will behave exactly the same, except, that in advanced mode you can also switch to the node or mesh mode. In object mode you can place a loaded SOD model with SPACE, select other models with keys PG Up and PG Down, remove selected models with DEL, as well as move and turn a selected object. A selected object is surrounded by a blue box. View toggles such as showing animations, construction animations, wireframes or emitters can influence how the model is displayed.

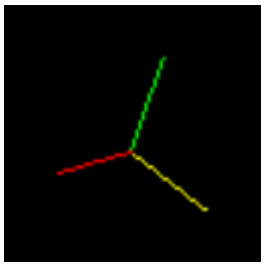
In object mode the following information is displayed:



- Top left you will find the file name of the currently selected object.
- Next to the file name you will find the objects radius (parenthesis).
- Next to that the number of currently loaded objects is displayed. Light sources do count as well.
- Below the file name you find the LOD mode. Initially this is *AUTO*, as it is selected derived from viewer distance and size of the object. But when altering the selected LOD with keys + and -, this will turn into *LOD 1* to *LOD **n***.
- Top right you will find the frame rate.
- Bottom left you find the current mode: *OBJECT*.

Node Mode

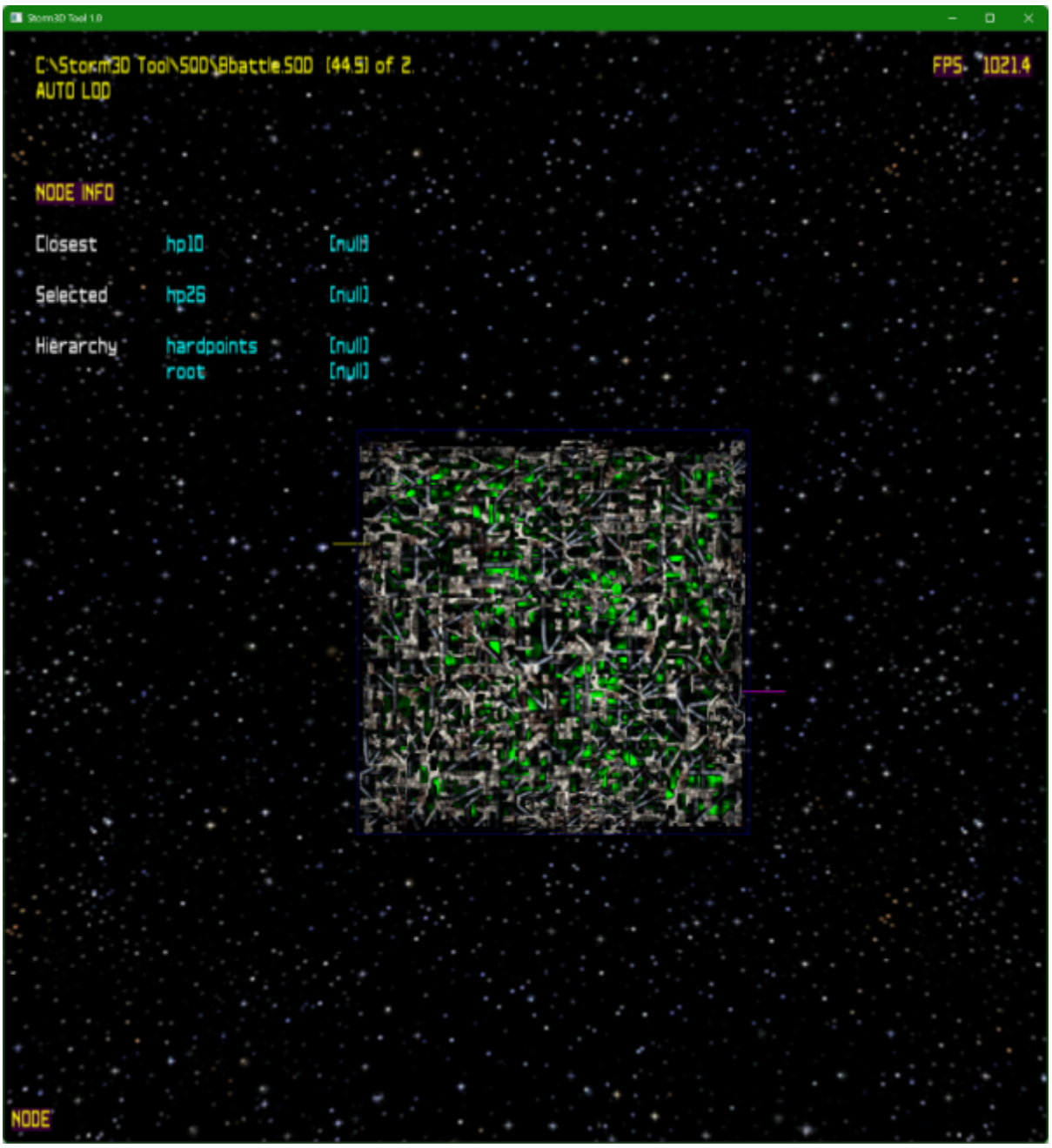
Node mode allows for manipulating the nodes of the hierarchy. So, not the entire model is selected with PG Up or PG Down, but only the nodes of the model. You can activate it by pressing F2 and then N. **Important**: Even when in node mode, DEL key will remove the entire model, not just the node. So avoid using it, unless you intend on removing the currently worked on model.



Selected nodes can be moved just as if they were entire models, including their directions. A node is represented by a triad of the three colors red, green and yellow. Their intersection (root) is the location of a node, while the yellow line indicates the direction the node faces. Some tools like Milkshape 3D cannot be used to properly set nodes **and** have them face the correct direction. If you use one of these modelling tools, you may need to adjust the node directions eventually, e.g. with *Storm3D Tool*.

When having selected a node that ties to a mesh group, pressing F7 switches to mesh mode, selecting the mesh that is tied to that node.

In node mode the following information is displayed:



- Top left you will find the file name of the currently selected object.
- Next to the file name you will find the objects radius (parenthesis).
- Next to that the number of currently loaded objects is displayed. Light sources do count as well.
- Below the file name you find the LOD mode. Initially this is *AUTO*, as it is selected derived from viewer distance and size of the object. But when altering the selected LOD with keys + and -, this will turn into *LOD 1* to *LOD **n***.
- Top right you will find the frame rate.
- Below the LOD info you will see the *NODE INFO*. It consists of:
  - The node which is closest to the mouse pointer right now.
  - The currently selected node.
  - The hierarchy below but not including including the currently selected node.
- Bottom left you find the current mode: *NODE*.

Mesh Mode

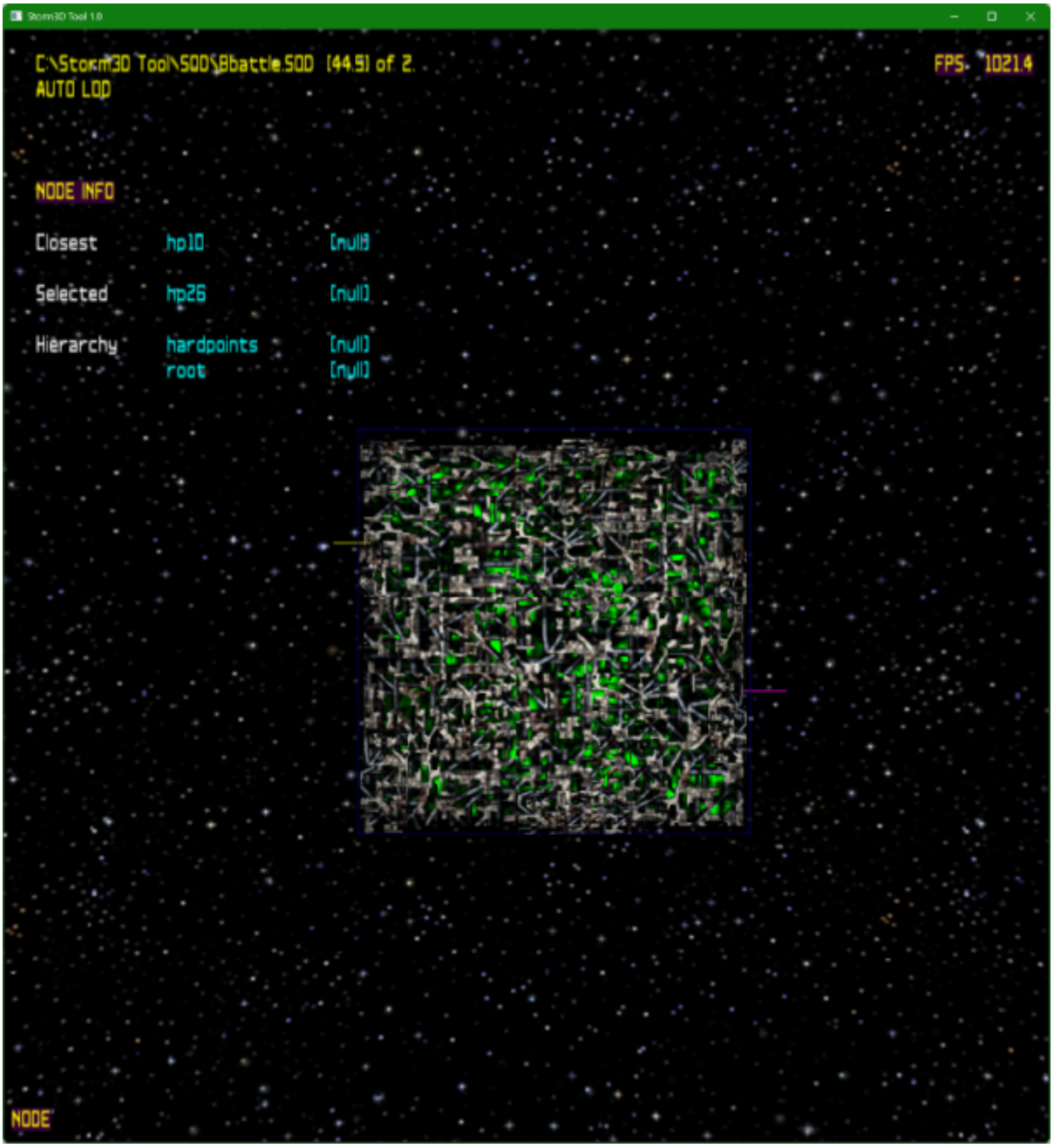
Mesh mode is used to manipulate model vertices and thereby also faces made up by them. In this

mode the PG Up and PG Down keys do not select an object or nodes but the different groups of the model, also making up the LODs of it. Mesh mode is activated by pressing F2 and then M. When working with it, it is recommended that you work on LOD 2 first, and later align the other LODs to fit the LOD2.

Once active, the mouse pointer will be surrounded by a cyan circle-like indicator. This indicator represents how big the selector is. Keys F5 and F6 change the size of the mouse pointer circle. When hovering it over vertices of the currently selected group, they get high lighted by smaller cyan circle-like indicators. When shift-clicking on the vertices, they turn purple. This indicates, that the vertex is selected for manipulation. When shift-right-clicking on selected vertices they get de-selected. Manipulation can then be achieved by either right-clicking and dragging the mouse pointer (translate the selected vertices in-plain) or middle-clicking and dragging the mouse pointer to translate the selected vertices perpendicular to the viewing plain.

As vertices have no direction, the left-clicking and dragging of the mouse pointer is free for other uses. It turns the model.

In node mode the following information is displayed:



- Top left you will find the file name of the currently selected object.
- Next to the file name you will find the objects radius (parenthesis).
- Next to that the number of currently loaded objects is displayed. Light sources do count as well.
- Below the file name you find the LOD mode. Initially this is *AUTO*, as it is selected derived from viewer distance and size of the object. But when altering the selected LOD with keys + and -, this will turn into *LOD 1* to *LOD **n***.
- Top right you will find the frame rate.
- Below the LOD info you will see the *MESH INFO*. It consists of:
  - The name of the currently selected mesh. An object consists of at least one, but usually multiple meshes.
  - The hierarchy below but not including including the currently selected mesh's node.
  - The number of vertices of the currently selected mesh.
  - The number of faces made up by those vertices.
- Bottom left you find the current mode: *MESH/VERTEX*.

Tricks

Removing the Starting Logo

When starting *Storm3D Tool*, you will be greeted by the *Star Trek: Armada* logo:

As the blue box surrounding it already indicates, this is a model currently being selected. To get rid of it, simply press DEL and it will be removed.

Getting a Black Background

In certain situations it is preferable to not have the starfield background be present, but a black background. However, you cannot select this starfield background, as you can with the initially displayed *Star Trek: Armada* logo. So you cannot remove it. It is essentially fixed placed in *Storm3D Tool*. But you **can** place a black background, as there is one provided by *Star Trek: Armada* itself. Simply load file *SOD\MbgBlack.SOD* and place it with SPACE. This is particularly useful when creating Wire Frames or button images.

Known Problems

As the tool is rather old, it has certain problems on modern systems. Specifically screen resolutions with more than 3071 pixels can lead to problems when going to full screen mode (ALT + ENTER) or when enlarging the window beyond that pixel number. (It does not matter if that is in x- or y-direction, both are affected.) Reason for that is a bug in the used Direct3D 7 framework, which crashes upon

exceeding 3071 pixels in any direction. You can enlarge the window for more convenience. (Specifically the fonts are enlarged and will therefore be readable a lot better.) But when doing so, make sure you don't create a window that is too big.

[**Modding**] [Tools]
