APPENDIX B: Preferences...2

Preferences

B.1 D3D settings

When you right-click on the D3D icon, you get access to the D3D settings panel

Bilinear Filtering

Bilinear filtering is a feature implemented on many hardware accelerator cards that will attempt to remove some of the artifacting that appears when your view is close to a texture map. This option lets you enable or disable bilinear filtering in your D3D displays. This has no effect on final render output, only during real-time rendering.

Perspective Correction

By enabling perspective correction, trueSpace will compensate for visual distortions that happen due to perspectives, giving you a more accurate view of your scene.

Enable Dithering

Enabling dithering allows trueSpace to simulate a higher number of colors than an original image (used as a texture or image map) consists of.

Video Memory Accel

Video memory acceleration enables trueSpace to take advantage of hardware memory if your video card has it. Turning this off tells trueSpace to only use non-local video memory, which usually means the system memory. This option should be turned on to increase performance.

Compress Textures

This instructs trueSpace to compress textures when possible in D3D mode. This is useful for using less overall memory, but is only available if the video card you are using supports it.

Procedural textures

Enabling procedural textures allows trueSpace to render a preview of how procedurally generated materials will look on the objects they are mapped to. This may affect performance, especially if a large amount of procedural materials are used in a scene.

Bump mapping

Real time rendering can display bump mapping on objects as well to give you an idea of how the bumps will look on final render. This may affect performance in real time rendering.

Transparency

This sets the level of transparency used in real time rendering for objects that are being edited.

- **Level 1:** This setting will give you the best performance, but the lowest quality of transparency. In some cases you do not see what is behind foreground objects.
- **Level 2:** At this transparency level, all objects are fully transparent but they are highly saturated with light. In this level the color blending is the same between two or more objects so it becomes difficult to distinguish between overlapping objects.
- **Level 3:** This is the highest quality transparency, but also the slowest.

Device

This displays what device trueSpace is using for the real time rendering. If possible trueSpace will use Direct3D HAL as this will have best performance. If this is not available, trueSpace will use either RGB Emulation or the Reference Rasterizer.

B.2 OpenGL settings

Right-clicking on the OpenGL icon will give you access to the OGL settings panel.

The OpenGL settings are all similar to the D3D settings covered above with a few features not available, such as "Compress Textures" and "Enable Dithering", and a few that are not available to D3D such as "MipMapped textures" and "Antialiasing".

Mipmapped textures

Mipmapped textures have different levels of detail depending on how close the viewer is to the texture. This setting enables trueSpace to make use of mipmapping to help performance.

Antialiasing

Antialiasing improves the appearance of textures through sampling and will frequently fix the jagged edges (or "jaggies") that occur on the boundaries of a texture.

Prefer: OpenGL32.dll or OpenGL.dll

Depending on which driver you wish to use, you can instruct trueSpace to have a preference using this dialog box. You only need to change this if you are having trouble using OpenGL; try changing to the other setting to see if that gives better performance.

B.3 Preferences Panel

The Preferences Panel is accessed from the File menu: File:Preferences.
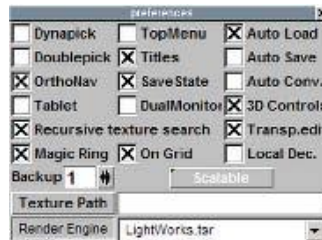
Dynapick

When Dynapick is enabled, an object can be selected and manipulated with the current tool without having to release the mouse button. The benefit is that many objects can be manipulated quickly by simply clicking and dragging on each object. If two objects are under the mouse pointer, selection alternates between them with each mouse click. When more than two objects are under the mouse pointer, selection gives preference to an object's edge or vertex.

Turning off Dynapick can help avoid accidental selection of objects while manipulating a complex scene. When Dynapick is disabled, you must select an object by clicking and releasing the left mouse button on it. Then you can manipulate the object by a second mouse click, or drag. This mode is useful when you wish to work with one object that is positioned on top of others. With an object selected, the mouse pointer need not be over the object in order to manipulate it.

Doublepick

Mouse double click is necessary to select an object. This can prevent accidental or unwanted selection.

OrthoNav

Normally, trueSpace uses the left mouse button to control actions along the X- and Y-axes, and the right mouse button to control actions along the Z axis. However, you can only work in two axes in 2D, or orthographic views (Front, Left, Bottom, Right, and Top).

The 2D Move setting, when enabled, allows you to use the left mouse button to control actions in both the horizontal and vertical directions in the Front and Left views. Note that the vertical direction corresponds to the World Z axis. If 2D Move is disabled, you must use the right mouse button to control vertical (Z axis) actions.

2D Move has no effect on a Top view. Top views always show the XY plane, and all actions in this plane always use the left mouse button.

Tablet

This setting is primarily intended for use with graphics tablets. trueSpace does not have any special support for

tablets, so they should be set up to run under Windows. If the tablet is set to use absolute positioning, this setting must be enabled in order for the device to work properly in trueSpace.

Normally, trueSpace allows proportional scaling through the use of both mouse buttons together. If you find it awkward to hold both buttons down, as with some tablet pens, you can enable this option. When the Tablet setting is enabled, the scaling will automatically be proportional on all three axis when using the left mouse button. If Tablet is enabled, and you want to temporarily turn off proportional scaling, simply turn off one or more axes in the Coordinates panel.

Recursive Texture Search

This lets you enter one or more user-defined paths for image map files. trueSpace has a flexible method of dealing with the location of image map files. When an image map is used in a scene or on an object, trueSpace will expect to find the file in the path specified inside the scene or objects file. However, if it does not find the image, trueSpace can continue to search. This makes it easier to move scenes and image maps to other machines and/or hard drives.

The places that trueSpace searches for image maps are controlled in the Change Texture Path field in the Preferences panel. It is possible here to define one or more directory paths in which the program will search for image maps. Separate directories need to be separated by semicolons (;).

Example:

      D:\TRUESPACE\TEXTURES;C:\MAPS

You can enter the first user-defined path via the keyboard, or by clicking on the Texture Path button, navigating to the desired subdirectory, and then double clicking on any file in that directory. To enter additional user-defined paths, you must use the keyboard. Using the Texture Path button always replaces any currently defined path(s). Materials are searched for in this order:

1. The material's last location.
2. In the current project's directory and its subdirectories for textures, bumps, and Environment.
3. In the current scene directory and its subdirectories for textures, bumps, and Environment.
4. In the user defined directory and its subdirectories for textures, bumps, and Environment.
5. In the current directory and its subdirectories for textures, bumps, and Environment.

If the recursive search is enabled:

a) In the user's directory and all of its subdirectories.
b) In all trueSpace subdirectories
c) In the current directory and all of its subdirectories.

If the texture is not found, then the user is asked for it. The recursive texture search can be interrupted by the ESC key. The dialog prompting for the location of the missing texture can be dismissed by clicking the cancel button.

Magic Ring

trueSpace can make advanced primitives using a control called the Magic Ring. This will toggle the use of advanced

primitives off or on. For a detailed explanation of primitives, see **Artist Guide Chapter 3: Modeling**. If this option is unselected, primitives behave as they do in previous versions of trueSpace with no extra sizing or control options available. There is a button associated with the advanced primitives which has two choices: scalable or automatic.

Automatic causes trueSpace to place primitives with default size and location as soon as one of the primitive tools is selected. Primitive parameters may only be modified before placing the primitive into the scene.

Scalable lets you size and manipulate a primitive after initial placement using the Magic Ring. In addition, the size of the primitive can be controlled during placement using the left and right mouse buttons. Scalable primitives are sorted into four groups:

1. Planar mouse tool for adding a plane:
   - Left-click adds a 3D primitive into the scene with default position and orientation; the mouse cursor defines the location of the object's center on the ground.
   - Left-click and drag adds a primitive into the scene while allowing the modification of primitive's diagonal size.
2. Cubic mouse tool for adding a cube:
   - Left-click adds a 3D primitive into the scene with default position and orientation; the mouse cursor defines the location of the object's base center on the ground.
   - Left-click and drag adds a primitive with following options:
   - Left drag for modification of the primitive's diagonal. Z dimension is equal to the smaller of the X and Y dimensions.
   - Right drag for modification of the primitive's height.
3. Spherical mouse tool for adding geosphere, rounded cube, rounded cylinder, sphere, and torus:
   - Left-click adds a 3D primitive into the scene with default position and orientation; the mouse cursor defines the location of the base center on the ground.
   - Left-click and drag adds a primitive into the scene; further movement modifies the primitive's radius. Right drag allows non-proportional scale in Z direction.
4. Cylindrical mouse tool for adding cone and cylinder:
   - Left-click adds a 3D primitive into the scene with default position and orientation; the mouse cursor defines the location of the base center on the ground.
   - Left-click and drag adds a primitive with following options:
   - Left drag for modification of primitive's radius.
   - Right drag for modification of primitive's height.

Primitives can be created in the side views (left, right, front, back) as well. In this case, only left-click creation using the default position and orientation works as there is no way to specify the "depth" of the primitive in the perpendicular view.

On Grid

When enabled, new primitives are placed with their bottom edges on the grid plane. Otherwise, new primitives are placed with their center on the grid plane. This applies to both Automatic and Scalable modes.

Local Decimal Separator

The Local Dec. option in the preferences panel allows the use of the local decimal separator in typed numbers.

TopMenu

The default position for new panels (such as tool options panels) in Model is at the bottom of the window. If you prefer to have them appear at the top of your screen, enable TopMenu. Note that this also affects the title bar in small view windows.

Titles

If this setting is enabled, control and property panels all have the standard Microsoft Windows title / drag bar across the top. You can use the title bar to drag the panel around your screen. Panels with title bars also have a Close box in the upper right corner. You can close a panel with a single left-click on the Close box.

To close a panel with no title bar, place the mouse pointer over a blank area of the panel. Press and hold the right mouse button while dragging it outside of the panel. You will see a large X appear over the panel. Release the button and the panel will close. To move a panel with no title bar, click and hold the left mouse button on the panel, and then drag the panel to the desired location.

Save State

If Save State is enabled, trueSpace will save the current state of the workspace on exit so when you return to trueSpace it will look exactly like when you left it. If this is not enabled, trueSpace will start up with whatever configuration was saved last.

Dual Monitor

This option gives users with multiple monitor support more control over their workspace. When this option is selected, child views may be moved outside the primary workspace to the second monitor, leaving a full, unobstructed main view with up to three child views from different angles on a separate monitor. This option has no effect in 4-view mode. When enabling or disabling this option all child views are closed.

Auto Load

Auto Load tells trueSpace whether or not you would like trueSpace to automatically load the last scene you were working with upon startup. If you deselect this option, trueSpace will start you with a new scene upon startup.

Auto Save

Auto Save is similar to Auto Load, except that enabling this option will cause trueSpace to automatically save the scene you are working on upon scene exit if it has already been saved at least once and has a name. This option is disabled by default, so you will be prompted to save changes when leaving a scene.

Auto Convert

When this option is unchecked, you will be prompted anytime a conversion from one object representation to another, such as NURBS conversion to polyhedron before a Boolean operation. The dialog box that appears will ask you if you wish to convert the object, giving you the option to proceed or not. This serves as a warning to you if you

did not know that an object has to be converted before an operation can take place as you may not have wanted to convert it. If you check this option, trueSpace will not prompt you but will assume you know what you are doing and perform conversions whenever necessary.

3D Controls

The 3D Controls checkbox enables or disables the displaying of all the controls, such as the View Control, the Rotary Control, the Selector Control and the Global Panel. 3D Controls and the 3D panel are a matter of preference and a different way of accomplishing tasks in trueSpace that may speed up your workflow. All tasks can be accomplished by other means, so these Controls are offered for those who wish to find new, faster methods for doing their work, but are not required for those who wish to stay with familiar interfaces. Controls are covered in depth in **Artist Guide Chapter 2: User Interface.**

Transparent Edit

When this option is selected an object will switch from being drawn solid to being drawn transparent any time the object is being edited. When this option is not selected an object will remain solid rendered during editing.

Backup

This sets the number of scene backup files trueSpace will create. The default is one, but can be increased or decreased depending on your preferences. To make a history of scene versions trueSpace will first save a scene to a temporary file, then will rename existing backup files if needed so that the oldest version has the lowest extension, and the newest backup version has the highest extension. For instance, with backup set to "0", when you save a scene called "myscene", trueSpace will do the following:

1. Create myscene.tmp.
2. Rename myscene.tmp to myscene.scn.

With the backup option set to 1, when you save the scene again trueSpace will do the following:

1. Create myscene.tmp.
2. Rename myscene.scn to myscene.bak.
3. Rename myscene.tmp to myscene.scn.

With the backup option set to 3, the following actions take place:

1. Create myscene.tmp.
2. Rename myscene.b02 to myscene.b03.
3. Rename myscene.b01 to myscene.b02.
4. Rename myscene.scn to myscene.b01.
5. Rename myscene.tmp to myscene.scn.

B.4 Display Options Panel

The display options panel can be accessed either by right-click on the draw modes icon, or from the File menu.
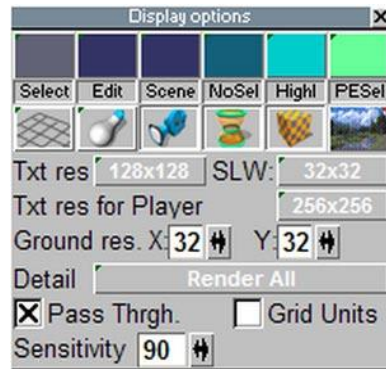
The top row of icons are dedicated to assigned colors to the different states of a wireframe object. Drag on the color to set a new color for the specific state. For example, to set the wireframe color for any objects that are in edit mode to yellow, left drag on the second color from the left to get the pop up menu of available colors. Select yellow from the list and release the mouse button. To test out how the color works, make sure you are in wireframe display, then go into edit mode on an object. You should see the object's wireframe drawn in yellow.

Note that enabling Use Wire Color in the Layer Wire Color panel overrides the color choices set here. If Use Wire Color is enabled, the wireframes of all objects on a layer will use the wire color set for that layer. (See Artist Guide Chapter 3: Modeling for details.)

Grid

Use the grid button (first on left after color settings) to set the display of the trueSpace grid. Your options are: textured grid, solid grid, wireframe grid, or hide. Hiding the grid will help speed up real time rendering, but the grid will be invisible. Setting the grid to wireframe (the default) will display a set of guidelines for you to work against. Setting the grid to textured or solid will give you more of an idea of where the grid is and when your objects go through it, but solid or textured modes will also slightly slow down the real time rendering. If your display is set to wireframe (instead of D3D or OpenGL), setting your grid to textured or solid will have no effect.

Visible lights

This will toggle the lights in your scene as either being visible, hidden, or wireframe.

Visible camera

Use this button to make all cameras in your scene either visible or invisible.

Visible deform objects

This will toggle the visibility of deform objects (objects used strictly as tools to deform other objects).

Texture view in solid render

This will toggle the rendering of textures in solid views. With this disabled, solid mode interfaces will still render lighting and color, but textures will not be previewed on objects. This can help speed up redraw of a complex scene.

Show background image

This will toggle whether or not a color or image designated as the background for a scene is displayed in the real time render. If you are using multiple views, the background image can be set on a per-view basis. Right-click this button to open the background image options.

- **Background image:** The image to be drawn in the background of the current view for real-time rendering modes. Left-click this box to bring up the texture browser; right-click it to bring up the standard Windows file browser.
- **Use Global:** When enabled, the current view will use the background image specified in Background Effects Shader - Image. Disabling this setting allows you to use a background image different from the Global image.
- **Lock:** When enabled, the background image is "fixed" in the current view as if it were projected onto a plane behind the view. When locked, the background image responds to changes made to the view, such as moving or zooming. (Note that this setting is not available in perspective view.) Otherwise, the background image remains statically placed, as if it were locked to the "eye" of the view.
- **Keep aspect ratio:** When enabled, the original aspect ratio of the image is maintained. Otherwise, the image is scaled to fit the current view.

Txt res

This controls how large the textures are drawn in real time render. Setting this higher gives you a more detailed display of the textures you are using in your scene, but will affect performance. Setting this lower gives a lesser approximation of the textures you are using, but will help performance. This setting does not affect the output of your final render.

Txt res for Player

Texture resolution used for Player textures. All textures shown in Player will be rescaled to this resolution to restrict memory usage.

SLW

Texture resolution used for SuperLightWorks materials when displaying them in the real-time rendering engine (both Model and Player). If there is an SLW material in the scene, this resolution will be used to render the SLW material preview, which is afterwards used in the real-time rendering engine.

Grnd res (x,y)

Changing these two fields sets the number of squares that the grid is made up of. This does not affect your final render output.

Detail

This setting effects how the trueSpace real time renderer draws the objects in your scene as changes are made, such as moving and object or moving the view. The options available are:

- **Render all:** Keep all objects drawn in real-time render.
- **Wireframe:** Unselected objects will switch to wireframe when a change is made.
- **All wireframe:** All objects (even the active one) will be drawn in wireframe when a change is made.
- **Always wire:** All unselected objects will be drawn in wireframe, even when no changes are being made. The active object will be rendered solid if solid render is set in display options.
- **All Always Wire:** All objects will always be drawn in wireframe.
- **Boxes:** Objects are drawn as boxes when changes are made. The active object remains rendered. Boxes mode faster than wireframe or full rendering.
- **All in Boxes:** All objects will be drawn in boxes when changes are being made.
- **Always Boxes:** All unselected objects will be drawn in boxes, even when no changes are being made. The active object will be rendered solid if solid render is set in display options.
- **All always boxes:** All objects will be drawn as boxes.

Pass Though

This toggle determines whether or not Per-object Draw Modes are used during real-time rendering. (See **Artist Guide Chapter 2:** User Interface.)

- When disabled, all objects in the scene are drawn using the currently active global drawing mode.
- When enabled, objects are displayed using their assigned draw modes. If the object has not been assigned a Per-object Draw Mode, or Object Mode Off is active, it is drawn using the active global draw mode.

  Note: The **Icon Finder** houses a **Pass Though** button that performs the same function as the Pass Through toggle on the Display Options panel, but may be placed anywhere on the desktop and displays the active mode.

Grid Units

When enabled, grid resolution will change every time an object with different units is selected. If you select, for example, an object which has units set to centimeters, the grid will change so that one quad of the grid will have exactly the size of one centimeter.
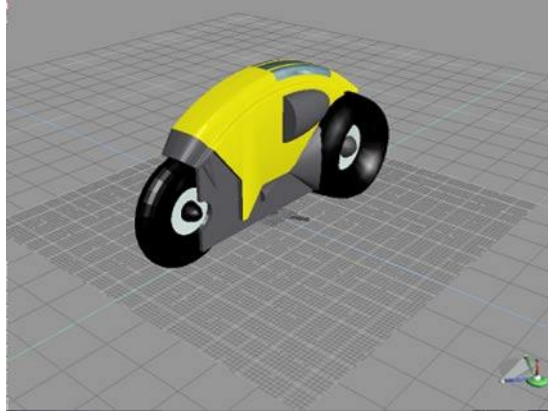
Grid in centimeter units

Sensitivity

By setting this number to something other than 0, trueSpace will only update the auxiliary windows when the mouse is not being moved. This can help performance when editing with multiple views open as you do not have to wait for all windows to update before continuing with your work. If this number is set as high as 100, only the current view window will be refreshed on changes. When the mouse is inactive for a period of time, the other views will be refreshed.

B.5 Global Panel

The Global Panel is a 3D interface into many common settings in trueSpace. Essentially, it is a square settings area surrounded on the left sides by menu controls that will display their options in the settings area. Shown below is the Global Panel with the grid settings showing, and each of the menu controls numbered for reference.
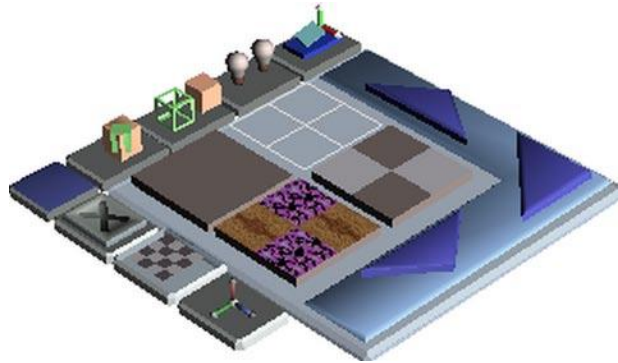
1. Close Global Panel.
2. Grid settings; ground size and visibility.
3. Enable / Disable 3D controls.
4. Object collision properties.
5. Appearance Renderers Setting.
6. Visibility of cameras, lights, deformation lattices, and physics and IK elements.
7. Choice between 3D Global Panel and non-rotating 2D Global Panel.
8. Drag Panel, used to move the Global Panel around.

To access any of the 3D menus, simply click on the appropriate 3D icon along the edge of the panel, and the panel will instantly display the selected 3D menu's options. If you have Tooltips activated, you will see a helpful text reference that lets you know you are in the right place.

The various options are arranged in a grid on the Global Panel. To select an option from the Global Panel, point your mouse to the desired option and click. The selected option will be highlighted by a wireframe box that envelops it.

Opening and/or Moving the Global Panel

To enable the Global Panel, you must ensure that the 3D Controls box is checked in your Preferences panel. (It will be on by default.) To open the Global Panel, select the Global Panel icon in the Object Tool toolgroup. If you wish to move the Global Panel, drag the global panel with the left mouse button on the icon in the left corner (labeled number 9 in the figure).

Closing the Global Panel

To close the Global Panel, click the icon labeled with an X (labeled number 1 in the figure).

Affixing the Global Panel in place

Clicking the Move Global Panel To/From 3D Space button (number 8 in the figure) toggles between two views of the Global Panel. When the Global Panel is set to rest in 2D space, it remains fixed in a three-quarters perspective, unaffected by eye rotation. When set for 3D space, you can rotate your eye around the Global Panel and see it from all angles. If you are having trouble seeing or using the Global Panel at first, try clicking this button to ensure a steady view. Once you have gained experience using the 3D menus, you might wish to free it up by placing it into 3D space.

Menu Setting

The Menu Setting panel (number 3 in the accompanying figure) allows you to customize your trueSpace interface.

- **Enable point edit controls:** Use this option to toggle off or on the creation of point edit controls when entering point edit mode.
- **Enable navigation controls:** Use this option to toggle off or on the creation of navigation controls in view windows.
- **Enable view controls:** Use this option to toggle off or on the creation of View controls in view windows.

Object Collision Menu

The Object Collision Menu allows you to set the parameters that determine how your trueSpace objects behave when they come into contact with one another. Using these settings allows you the maximum amount of freedom and precision according to the needs of your scene, or to determine the most efficient settings for your particular machine. Note that you must set the collision properties of individual objects by bringing up the object's 3D menu (explained in detail in this section). Refer to the accompanying figure for the explanation of the Object Collision commands that follows.

First Tier (or, Who Hits What?):

1. **Collision With All** - Solid (collision-enabled) objects stop when hitting any other object.
2. **Collision With Peers Only** - Solid objects pass through non-solid objects but collide with other solid objects.
3. **Collide With Ground Only** - Solid objects collide with the Grid, but pass through all other objects.
4. **No collision.**

Second Tier (or, What Happens after a collision?):

5. **Stop After Colliding** - The collidor halts in place when it encounters another solid object or the Grid.
6. **Stick After Colliding** - The collidor comes to rest on the surface of other solid objects or the Grid, much like the Magnetic tool.

Third Tier (Collision Precision)

7. **Low precision collision (default)** - trueSpace performs minimal calculation for detecting collisions. This is the best setting for older machines, or when working with more complex objects (those with a higher face count).
8. **High precision collision** - the most accurate collision detection setting. This is the best setting for more powerful computers, or for detecting collisions between simple primitives such as planes and cubes.

Appearance Renderer Settings

These settings on the global panel are the 3D equivalent to the 2D popup menu explained in **Artist Guide Chapter 2: User Interface** under Draw Mode.

Visibility

Through the Visibility menu, you can toggle the visibility of certain elements of your scene. If, for example, you are happy with the lighting scheme of your 3D scene and do not wish to alter a light source accidentally, you can hide the lights by clicking the Make Lights Visible tool. Similarly, you can hide deformation lattices to speed up scene navigation.

1. **Make cameras visible** - Show/hide all cameras in your scene.
2. **Make lights visible** - Show/hide all lights in your scene.
3. **Make lattices visible** - Show/hide all stand-alone deformation lattices in your scene.
4. **Draw/Hide Inverse Kinematics Joints** - Show/hide all IK joints and connectors; especially useful for working with bones objects. See **Artist Guide Chapter 6: Animation** for more information.
5. **Draw/Hide Physics Resources** - Show/hide Physical Simulator indicators (vectors, center of gravity, etc.) See **Artist Guide Chapter 6: Animation** for a more detailed description.
6. **Draw/Hide Inverse Kinematics Effector** - Toggles the visibility of the effector (the yellow line which indicates force and direction when manipulating a skeleton). See **Artist Guide Chapter 6: Animation** for more information.
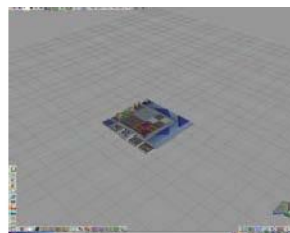
Ground Settings

The Ground Settings menu allows you to modify the appearance and size of the Ground . Although the Ground will not appear in your rendered scene, you can make adjustments to help you in your modeling and scene layout.
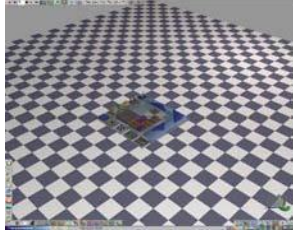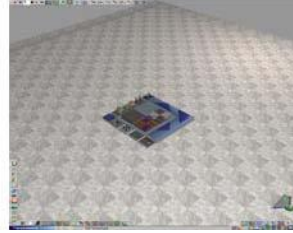
Ground Appearance Settings
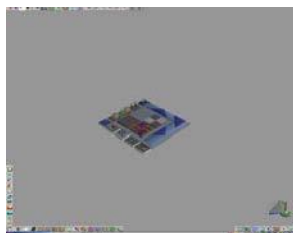
Set grid to Hide

Set grid to Wireframe

Set grid to Solid

Set grid to Textured

Ground Size Settings

Click and drag on any of the three Ground Size Settings tools to modify the size of the Ground. Drag left to decrease the size setting, or drag right to increase it.

B.6 Object Properties Panel

When this panel is first displayed, only a subset of these settings is shown. To open the complete panel, press the red arrow at the top-right of the panel.

Location

These three settings show the current object's position in the world according to the axis of the current object. The unit of measurement displayed is either in the World or Object system, depending on whether Dynaunits is disabled or enabled. Change the position values by clicking on the X, Y and Z boxes, entering a new value from the keyboard, and pressing Enter. Location values may also be entered as formulas involving addition, subtraction, multiplication, and division functions. Parentheses may be employed within formulas. As an example: 43+67-5 or 43*(8+7).

Rotation

These three settings show the current object's alignment in degrees. Change the alignment by clicking on the X, Y and Z boxes, entering a new value from the keyboard, and pressing Enter. Rotation values may also be entered as formulas involving addition, subtraction, multiplication, and division functions. Parentheses may be employed within formulas.

Size

These three settings show the current object's absolute scale values which are displayed either in the World or Object system, depending on whether Dynaunits is disabled or enabled. Change the scale by clicking on the X, Y and Z boxes, entering a new value from the keyboard, and pressing Enter. Scale values may also be entered as formulas involving addition, subtraction, multiplication, and division functions. Parentheses may be empolyed within formulas.

Name

This shows the object's name and lets you change it. Objects other than primitives, cameras, and lights are automatically called NoName when created. Primitives, cameras and lights are named automatically and have numerical extentions added for each new instance. For example, adding to spheres to your scene will show you that the first one is named "Sphere" and the second is named "Sphere,1". To change the object's name to one that you prefer, click on the name and enter a new name from the keyboard, then press Enter. You can also use this box to unselect all objects, by choosing "None".

Layer

This is the name of the layer that the current object resides on. You can change its layer assignment by choosing a different layer from the drop-down list.

 # Vertices

This shows the number of vertices in the current object. Since the only way to change this value is by interactive editing, it cannot be changed in the property panel.

 # Faces

This shows the number of faces or polygons in the current object. Since the only way to change this value is by interactive editing, it cannot be changed in the property panel.

Tip: If you unselect all objects (choose None in the name drop-down box), the # Vertices and # Faces values will reflect totals for the scene.

Class

Display the type of an object (e.g. polyhedron, camera, light, metaball).

LOD Distance

You can enter a numeric value into this box to set the LOD distance. This value is documented in greater detail in Artist Guide Chapter 3: Modeling.

Inlined

This check box lets you indicate whether or not the object should be inlined during VRML export. Note that this setting just marks individual objects for possible inlining. The Export VRML Files dialog has a global setting that determines whether or not any inlined files are created. See Developer's Guide Chapter 10: File Formats for more information.

Obj. Convert

The **Obj. Convert** popup will convert units of objects, which means 1m changes to 1mm if you select millimeters and had meters before. The size of affected objects will change compared to other objects in the scene.

Obj. Units

The **Obj. Units** popup will change units of objects, which means 1m changes to 1000mm if you select millimeters and had meters before. The size of affected objects will not change compared to other objects in the scene.

Scn. Units

The **Scn. Units** popup will change units of all objects in the scene, similar to the Obj. Units popup. Another effect of

changing scene units is that it changes implicit units, meaning the default size of one grid quad or unit to which object units are referenced. You can see this effect by watching the location or size vectors while changing object and/or scene units.

Render Options

This button brings up the Object Render Options Panel.
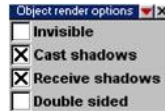
- **Invisible:** This check box lets you indicate whether or not the object should be visible. Making objects temporarily invisible helps in speeding up navigation with complex scenes. You can also use an invisible object as a "null object" in animation with the Look At function to control the camera's aim without having it pointing at a specific object.

  Note: To unhide all invisible objects at once, click the Unhide All Objects icon (located on the same toolbar as the Object Tool).

- **Cast Shadows:** Enable or disable an individual object's abilities to cast shadows.
- **Receive Shadows:** Enable or disable an individual object's abilities to receive shadows.
- **Double Sided:** When enabled, the trueSpace renderer will treat this object as two-sided, regardless of the state of the Enable Single-sided rendering setting on the render options toolbar. Faces with normals pointing away from the camera will be rendered visible.

B.7 Startup Menu

The startup menu (accessible by holding the CTRL key while starting trueSpace) allows you to start trueSpace in any real time mode, as well as start a "clean" trueSpace session without automatically loading any stored configurations and projects.
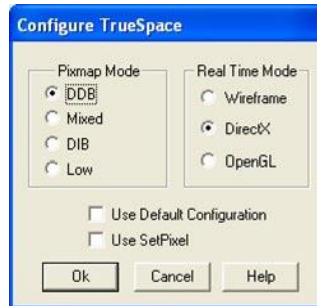
- **PixmapMode:** Allows the selection of the DDB (device-dependent bitmap), Mixed, DIB (device-independent bitmap) and Low mode for the software wireframe real time display. Note that this setting does not affect any of the real time rendering modes (DirectX, OpenGL).

- **Real Time Mode:** Allows the selection of the default real time rendering mode for all views from the following list: wireframe (software mode only - no hardware acceleration), DirectX (hardware acceleration if the graphics card supports it) and OpenGL (hardware acceleration if the graphics card supports it). We suggest using DirectX as the default setting on any system that supports it (Windows95, Windows98, WindowsME, Windows2000, WinXP). Use OpenGL on WindowsNT, as DirectX is not supported. Please note that when dealing with very complex scenes, the hardware accelerated OpenGL mode might give faster refresh rates than the DirectX mode.

- **Use default configuration:** If this setting is checked, then trueSpace starts without loading any stored configurations (from the truespace.cfg file), projects/libraries, and default scene. This mode is suggested when having problems loading the previously created configuration.

- **Use SetPixel:** Special compatibility mode for software wireframe - use only if trueSpace refuses to run in software wireframe mode.