

# Claytools v4 New Features and Enhancements

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The following is a summary of new features and enhancements in Claytools v4. For a more comprehensive look at the new features and enhancements in the v4 release see the online Help topic titled "What's New?" You can access the help from within the Claytools application by pressing F1. Or from the Start Menu group.

## **APPLICATION WINDOW**

### **Enhancements:**

#### **Memory Meter**

The memory meter, located in the bottom right corner of the Claytools application window has been enhanced with colored memory zone indicators. To the left of the numerical Memory Usage - which represents the total memory usage of the Claytools application and other applications running on your system - you will see either a yellow or red memory zone indicator. If the memory zone indicator is red your system is running low on memory.

## **CONSTRUCT CLAY**

### **New Features:**

#### **Curve Spheres to Clay**

The Curve Spheres to Clay tool has been added to the Construct Clay palette. Using this tool you can edit curve spheres and/or convert curve spheres into clay. To create curve spheres either turn on the spheres button on the Draw Curve dynabar when drawing a curve, or select a curve and set the dynabar option "Spheres" to "On" using this tool.

#### **Pipe**

The Pipe tool has been added to the Construct Clay palette. You can use the Pipe to easily add or remove clay using a curve.

### **Enhancements:**

#### **Mirror Clay**

A new option has been added to the Mirror Clay dynabar - Mirror Entire Piece. The new option, combined with the existing Create in New Piece controls the three mirror modes.

If Mirror Entire Piece is off and Create in New Piece is off, the clay on the back of the mirror plane is removed and the clay in front of the plane is mirrored into the original piece.

If Mirror Entire Piece is on and Create in New Piece is off, the entire piece is mirrored about the mirror plane in place (no new piece). Note that the clay in front of the plane goes to the back and the clay in back goes to the front.

If Mirror Entire Piece is on and Create in New Piece is on, it works like above but a copy is mirrored leaving the original in place.

### **Pattern Piece**

The Pattern Piece tool has been enhanced. The dynabar option, Snap Origin to Endpoint is no longer selected by default and it now has a submenu that works in conjunction with the Rotation Control options. The submenu displays different options for Rotation Control selection. Three options that have been added to this submenu that are always present are Auto Snap Origin for Curve, Auto Snap Origin for Sketch and Clear Snap.

### **Wire Cut Clay**

The Wire Cut Clay tool has been enhanced to include a Flip check box on the dynabar that provides the ability to control the direction of the plane offset.

## **CURVES**

### **Enhancements:**

#### **Draw Curve**

The Draw Curve dynabar has been enhanced with new modes and a new option. To draw curves you must select one of the Draw Curve modes:

- Create Edit Point Curve
- Create Traced Curve
- Replace Curve Segment

Another new option on the dynabar is Curve Spheres. When selected, curve spheres will be created around the curve. Once drawn, you can use the new tool Curve Spheres to Clay to convert the spheres to clay. Also, because these spheres are created from curves, you can use the Mirror Curve tool to create multiple curve spheres.

## **Fit Curve**

The Fit Curve dynabar and advanced options were enhanced. The option Use Global Settings was renamed Use Settings and was moved from the dynabar to the advanced options along with the Best fit resolution option.

## **Projecting a Sketch Curve**

The Projecting a Sketch Curve dynabar has been enhanced. The Advanced options have been removed and replaced with a Tolerance input which defines the control point spacing and preserves the 2d (sketch) curve profile as it is projected to the target object.

## **DETAIL CLAY**

### **Enhancements:**

#### **Creating a Ridge**

The Creating a Ridge tool has been enhanced with a new dynabar option, Join Multiples. With this check box selected multiple curve selections with shared endpoints will be joined together to create a ridge. When deselected, separate ridges will be created for each curve.

#### **Emboss with Image**

The Emboss with Image tool has been enhanced with new additions to the Image Properties dialog. New to Image Properties in v4 is the Image Width and Image Height. These fields display the width and height of the original image in pixels. The option Lock Aspect Ratio has been renamed Lock Current Aspect Ratio and the option Actual Size has been renamed Reset Aspect - this option will reset the current while recomputing with the specified Resolution.

## **GENERAL OPTIONS**

### **New Features:**

#### **Memory Options**

The Tools Menu>Options>General section has a new page of options specifically for Memory.

#### **Spaceball Options**

The Tools Menu>Options>General section has a new page of options specifically for the Spaceball device. The Spaceball device provides the ability to manipulate the controller's pressure-sensitive handle to pan, zoom and rotate 3D imagery simultaneously, without stopping to change directions using keyboard shortcuts or the software interface.

## **Enhancements:**

### **Curve Options**

The Tools Menu>Options>General>Curves dialog has a new option, Preview Draw Curve fit point. This option, selected by default, will enable a preview of the curve point when drawing a curve that will be fit to a clay or mesh. A shadow point will appear on the surface identifying where the fit point will be placed when the curve is not in contact with the surface.

### **Features Options**

The Tools Menu>Options>General>Features dialog has a new option. The option File Import saves/restores prior view provides the capability to return to the view in effect before you imported a file.

### **Object List Options**

The Tools Menu>Options>General section has a new page of options specifically for the Object List. In previous versions some of these options were located on different dialog pages, such as Force Unique Object List Names. New options have also been added to this added, such as Show Toolbar, and Override Folder Visibility (for Pieces). Also added to the Object List options is a check box Remember Object Type filter states which, when selected, will recall the state of your Object List Filters (from the Object List Toolbar) between Claytools sessions.

With the option Override Folder Visibility (for Pieces) selected pieces in the Object List will remain visible when the Flatten Folders option has been enabled on the Object List toolbar.

The Object List has also been enhanced to improve the renaming of objects. With the option Rename objects with double click selected, you can double click an object name in the Object List to rename that Object. You cannot double click to rename a folder or sketch elements in the Object List.

## **OBJECT LIST**

### **New Features:**

#### **Clay Utilities**

The Object List Context Menu has a new sub-menu, Clay Utilities. The commands found on this sub-menu include: Copy to Mesh, Fill Voids, Create Offset Piece, Add to Mask and Add to Buck.

#### **Export Planes as .CLY Files**

You can now export Planes as .cly files through the Object List Export Model dialog.

## **Mesh Utilities**

The Object List Context Menu has a new sub-menu, Mesh Utilities. The commands found on this sub-menu include: Copy to Clay, Divide, and Reverse.

## **Enhancements:**

### **Duplicate**

The Duplicate option, found on the Object List Context Menu has been enhanced to provide the capability to duplicate a selected Folder and its contents as well as selected Planes in the Object List.

### **Hide Associated Objects**

The eye icon indicates if the object is visible. The Object List has been enhanced so that you can also hide the associated objects of a piece, for example a curve. Pressing the Alt key and clicking the eye icon will hide or show the associated objects.

### **Object List Search Function**

The Object List Search Function was enhanced with new search options. The options, Find & Select All and Find & Select Cumulatively were replaced with Select One, Add to Selection, and Select All Instances. These new options provide the ability to highlight search results one object at a time, to keep search results highlighted as you scroll through the Object List and to highlight all search results in the Object List.

Also added to the Search Function is the option, Loop Back to Start/End. Select this option to automatically continue searching the Object List when the search has reached the top or bottom of the Object List.

### **Object List Toolbar**

The Object List was updated with a toolbar. The Toolbar runs across the bottom of the Object List and has eight icons. The icons provide the ability to sort the Object List alphabetically, to hide/show folders, planes, curves, and hidden objects, as well as open the Object List Search Function.

### **Override Folder Visibility (for Pieces)**

The option, Override Folder Visibility (for Pieces) was added to the new Object List Options dialog through the Tool menu. You can use this option so that pieces in the Object List will remain visible in the Object List when the Flatten Folders option has been enabled on the Object List toolbar.

## **Renaming in the Object List**

The Object List has been enhanced to improve the renaming of objects. In previous versions of Claytools, you had to rename an object using the Object List Context Menu. While that option still exists, with the option Rename objects with double click selected in the Tools>Options>General>Object List selected, you can double click an object name in the Object List to rename that Object. You cannot double click to rename a folder or sketch elements in the Object List.

## **See Through On/Off**

The See Through Objects function has been enhanced to provide the capability to set the see-through status of multiple objects at the same time. With multiple objects selected in the Object List you can access this option by right-clicking one of the selected objects to view the Object List Context Menu.

## **Show Children/Hide Children**

The Show Children/Hide Children options found on the Object List Context Menu for planes are enhancements that provide the capability to show or hide all sketch elements from a selected plane in the Object List and workspace.

## **PAINT**

### **New Features:**

#### **Airbrush**

The Airbrush tool has been added to the new Paint palette. Using this tool you can color a model with an airbrush.

#### **Paint**

The Paint tool has been added to the new Paint palette. Using this tool you can color a model with a paintbrush.

#### **Project Image**

The Project Image tool has been added to the new Paint palette. Using the Project Image tool you can project an image to the model from a plane.

#### **Wrap Image**

The Wrap Image tool has been added to the new Paint palette. Using the Wrap Image tool you can apply an image (.bmp, .jpg or .psd) to an area of the model defined by a four-sided curve loop.

## **POSITIONING**

### **Enhancements:**

#### **Reposition Piece**

The Reposition Piece tool has been enhanced. If you are manipulating heavy clay pieces, the shading, set in View Menu>Shading Clay will automatically default to Always Sparse Shade to improve the speed of your manipulation. However, if you have already set the Shade Clay settings to Always Full Shade the settings will not be altered. With Always Full Shade selected manipulations may be made more slowly and appear as choppy movements. A piece will not default to Always Sparse Shade if you are using Precise Movement.

## **SCULPT CLAY**

### **New Features:**

#### **Carve with Corn Dog**

The Carve with Corn Dog tool has been added to the Sculpt Clay palette. Use this tool to carve into clay with a corn dog-shaped tool head.

#### **Carve with Cube**

The Carve with Cube tool has been added to the Sculpt Clay palette. Use this tool to carve into clay with a cube-shaped tool head.

#### **Carve with Scraper**

The Carve with Scraper tool has been added to the Sculpt Clay palette. Use this tool to carve with a scraper-shaped tool head.

#### **Hot Wax**

The Hot Wax tool has been added to the Sculpt Clay palette. Use this tool to interactively melt the edges of the clay with a ball-shaped tool by adding or removing clay. Hot Wax has very unique dynabar options for smoothing clay - Melt, Smooth, Add and Remove. The dynabar also includes the Mask Transition drop-down menu. On the drop-down menu you will find the following transition options, None, Blended, and Sharp which control how/if the mask volume will be smoothed.

### **Enhancements:**

#### **Smooth**

The Smooth tool has been. New dynabar options have also been added to the Smooth Tool that provides the capability to select a Smoothing mode. The available modes are Outside Smooth and

Inside Smooth. The Outside Smooth option will smooth the clay with an area of influence outside the tool sphere while the Inside Smooth option uses the area of influence within the tool sphere.

The Smooth tool has also been enhanced to improve smoothing when there is a mask involved. The Blend with Mask check box has been replaced with a Mask Transition drop-down menu. On the drop-down menu you will find the following transition options, None, Blended, and Sharp which control how/if the mask volume will be smoothed.

### **Smooth Area**

The Smooth Area tool has been enhanced to improve smoothing when there is a mask involved. The Blend with Mask check box has been replaced with a Mask Transition drop-down menu. On the drop-down menu you will find the following transition options, None, Blended, and Sharp which control how/if the mask volume will be smoothed.

## **SELECT/MOVE CLAY**

### **Enhancements:**

#### **Mask**

The Mask tool has been enhanced. The Add to Selection icon has been removed from the dynabar. In Claytools v4, Mask is set to Add to Selection by default and the Remove from Selection icon has been changed on the dynabar.

#### **Select with Ball**

The Select with Ball tool has been enhanced. The Add to Selection icon has been removed from the dynabar. In Claytools v4, Select with Ball is set to Add to Selection by default and the Remove from Selection icon has been changed on the dynabar.

#### **Select with Lump**

The Select with Lump tool has been enhanced. The Add to Selection icon has been removed from the dynabar. In Claytools v4, Select with Lump is set to Add to Selection by default and the Remove from Selection icon has been changed on the dynabar.

#### **Select with Profile**

The Select with Profile tool has been enhanced. The Add to Selection icon has been removed from the dynabar. In Claytools v4, Select with Profile is set to Add to Selection by default and the Remove from Selection icon has been changed on the dynabar.

## **Separate Tool**

The Separate Tool has been enhanced with the capability to separate mesh objects. Mesh objects can be separated with a plane. You cannot multi-separate a mesh object or separate a mesh with a curve.

## **SKETCH**

### **Enhancements:**

#### **Control Point Curve**

The Control Point Curve tool has been enhanced to remove the editing options Preserve Detail and Uniform Spacing. These options are now only available when you Select a Sketch Object to edit.

#### **Freehand Curve**

The Freehand Curve tool has been enhanced to remove the editing options Preserve Detail and Uniform Spacing. These options are now only available when you Select a Sketch Object to edit.

## **TOOLS MENU**

### **New Features:**

#### **Repair Curves**

A new option, Repair Curves, has been added to the Tools menu. This command detects zero length curves, duplicate curves, similar curves and duplicate end points. The command allows you to delete the offending curves and merge the end points. In the case of duplicate and similar curves there is an option to hide the offending curves as well as delete them.

## **VIEW MENU**

### **New Features:**

#### **Hide/Show Mesh Pieces**

A new toggle option has been added to the View menu, Show Meshes. Click to toggle the display of mesh pieces on and off. When selected, only the active mesh piece in the Object List will be shown in the workspace. When deselected, all entities will be shown in the workspace.

## **VIEW OPTIONS**

### **Enhancements:**

#### **Colors Options**

The Tools Menu>Options>View>Colors dialog has a new option, Use Background Image. Selecting the checkbox provides the ability to browse for and select a specific image to use for workspace background.

#### **Setup Options**

The Tools>Options>View>Setup dialog has a new section for View Rotation Center. There are three check boxes: Bounding box center of all visible objects, Active piece origin, and Global Origin. Select one of these options to define the center for an objects rotation. The Setup dialog has also renamed the Parting Line Draft Angle input. This input is now named, Angle for Draft Colors.

#### **Sketch Options**

The Tools>Options>General>Sketch dialog has a new section for shrinking sketch planes using the hot key Alt+M. In the sketch options you can choose to shrink the plane using the sketch object as the center or the center of the current (active) plane as the center.

