

## DesignCAD 3D Max 22.1 Release Notes

December 2012

This update to DesignCAD offers the following improvements and fixes:

### BasicCAD:

We have added some new **Query/Change** parameters to address missing functionality:

- Alias AW\_CURVED &H0905 'R/W - b (0: false, 1: true) version 22.1 – indicates/sets the ability to draw an arrow with a curved body.
- Alias D\_EXTENSIONLENGTHFIXED &H0A22 'R/W - b (0: variable extension length, 1: extension length fixed) version 22.1 – indicates/sets whether a dimension's extension line uses a fixed length or variable length.
- Alias D\_EXTENSIONGAP\_LEN &H0A23 'R/W - f (sets/returns extension line length if length is fixed, otherwise sets/returns extension line gap size) version 22.1
- Alias D\_EXTENSIONOVERSHOOT &H0A24 'R/W - f (sets/returns the length of the extension line overshoot) version 22.1
- Alias D\_APPENDUNITSSUFFIX &H0A25 'R/W - b (0: units suffix not appended, 1: units suffix auto-appended) version 22.1
- Alias SY\_ORIGINAL\_COLOR &H0E0F 'R/W – b (0: don't use original color; 1: use original color) version 22.1 – implements BasicCAD support for the "use original color" option for blocks in the Info Box.

The *Type* parameter of the **DwgOut** and **DxfOut** commands wasn't always giving the expected version. This should now work correctly

### OLE Automation

We have added the necessary definitions to allow saving drawings to DesignCAD version 20, 21, and 22.

### General Fixes:

Fixed: The Mirror command was not correctly rotating blocks and symbols in 3D space.

Fixed: Gradient hatch patterns from externally referenced symbols or blocks were "multiplying" when the drawing was saved, eventually resulting in a huge number of duplicate gradient hatch patterns.

Fixed: Solved an issue with the Info Box's "Area Info" crashing on a particular bit of hatching.

Fixed: Group Explode after Select All sometimes caused entities that were in Nested Groups to disappear from the drawing.

Fixed: Using the Info Box to change Bounding Box values of wide-line entities did not work consistently.

Fixed: The Display Grid option flag was being saved with "Save as Default", but not read back in.

Fixed: Grid settings saved as default from the New File Wizard weren't "sticking".

Fixed: Section Trim sometimes caused a crash.

Fixed: Filleting a 3D polyline sometimes caused a crash.

Fixed: Zooming in on a curve with many, many points could cause a crash.

Fixed: Editing long text in the Info Box could sometimes cause a crash.

Fixed: Section Trim on arcs or circles was sometimes leaving very tiny arcs that could not then be deleted via Section Trim.

Fixed: Sometimes AutoSave was only working intermittently.

Fixed: Section Trim sometimes would cut lines but not delete the cut section (for example, horizontal or vertical lines at the edge of the selected section).

Fixed: Filleting multi-segment lines with fillet radius exactly equal to segment length would result in "command failed".

Fixed: Filleting two arcs would often result in incorrect results.

Fixed: Using Shift-Tab in the Info Box when a dimension was selected would crash DesignCAD.

Fixed: Some operations in 3D mode would corrupt the surface normals of unrelated objects, causing them to shade incorrectly until the drawing was saved and reloaded.

Fixed: In 3D shaded or hidden line mode, sometimes clicking directly on an object would select the wrong object.

Fixed: In the Fillet command, if you selected "Keep original lines" and trimmed two arcs, the behavior was incorrect, and inconsistent with the results of filleting two lines or a line and an arc.

Fixed: Solid Explode, while in Graphics Acceleration mode, would cause some entities to turn black, requiring a Regen of the drawing screen.

Fixed: Some attributes that should be visible were not being shown.

Fixed: In 3D mode, the Rotate command when using the Y axis would sometimes rotate in the opposite direction of the intended result.

# DesignCAD 3D Max 22.0 Release Notes

May 2012

Thank you for purchasing or upgrading to DesignCAD 3D Max Version 22.0. This release of DesignCAD offers the following new features, improvements and fixes:

## New commands

**File/Print Section** – This new command allows you to specify a rectangular subsection of the drawing to be printed; once the region is selected, the Print command opens, and only considers the area you chose when calculating overall size, scale, and other print features.

**Edit/Selection Edit/Convert/Double Line to Vector** – This new command converts the selected double line object(s) to normal vectors using the currently-active line style and line width. **Note:** *This command differs from the similar command Double Line to Wide Line, which converts the selected double lines to wide lines of the same width as the original double lines.*

**Options/Layer Options** – The **Layer Options** dialog has been redesigned to maximize the amount of layer information displayed. It can be resized to show more layers and longer layer names; unwanted columns can be hidden by right-clicking on the column headers. Right-clicking on the body of the layer list provides a context menu which exposes commands that were formerly presented as buttons. New capabilities have also been added, including: Show Highlighted Layers, Hide Highlighted Layers, Lock Highlighted Layers, Unlock Highlighted Layers, Clear Highlighted Layer Colors, Clear Highlighted Layer Linestyles, Clear Highlighted Layer Names and Clear All Layer Names. The **Save as Default** button now saves the layer names along with the layer presets.

**Note:** *Those who prefer the old **Layer Options** dialog will still be able to access it from the **Layers** tab of the **Options/Options** command.*

**BasicCAD users:** *the new Layer Options dialog can be opened with the LayerOptions2 macro command.*

## New options

**Options/Options/General** → **Coordinate bar field width**: This option lets you specify the width (in pixels) of the coordinate bar's numeric fields. This can be handy when you want to display more digits, are displaying coordinates in feet and fractional inches or are using a large display font. The minimum value is 48 pixels; the maximum will vary depending on the width of your display.

**Options/Options/General** → **Layers list additional width**: This option lets you specify how much extra width (in pixels) to add to the layer drop list in the **Info Box** and **Layer Toolbox** relative to the layer control.

## Command Enhancements

**Print command:** Printing multiple panels to PDF format now results in just one multipage PDF file.

**Hatch, Hatch Line, Hatch Fill:** A new **Same As** button in the **Hatch** dialog allows you to easily match the style of the hatch being drawn to an existing hatch entity.

**Several commands using “Selected only” checkboxes:** For many commands, the last state of the “Selected entities only” checkbox is remembered; each the next time you run that command with something selected, the checkbox is checked or not depending on your last choice. If nothing is selected the setting is ignored.

**Import command:** The **Missing Xref** warning dialog now offers options to skip some or all missing xrefs when importing DWG files.

**Export command:** The export of paperspace layouts to DWG format has been improved.

**Export command:** DWG/DXF export now exports layer names longer than 32 characters.

**Load Animation Template:** There is now a **Delete** button to allow you delete an existing animation template from the drawing.

**Fillet command:** A new algorithm has been implemented for filleting one arc against another; this should result in less ambiguity when filleting arcs where multiple solutions are possible.

**Arrow and Dimension commands:** A new algorithm for drawing arrows with a line width has been created. The result is an arrowhead that points where it should and ends in a sharp point.

**Dimension Arc:** The appearance of **Dimension Arc** extension lines has been improved.

**Linear Dimensions:** The gap has been reduced between the arrow “tail” and the dimension text when the text and arrows are forced outside the extension lines.

**Linear Dimensions:** A snap point has been added to the left-side arrowhead; this enables lengthening or shortening extension lines using that arrowhead in Point Select Mode.

**Hidden Line Mode:** An option was added to change the dash scale for hidden lines in Hidden Line Mode.

**Section Trim:** The Section Trim command now affects hatch objects. Previously hatch entities were ignored by this command.

**New File Wizard:** There are now options **to Ignore Shading Flags** and **Ignore View Data**, just like were already present in the Open dialog.

**Surface Intersection:** Previously this command only worked on grid objects. Now it also works on solids, including planes.

**Set View** and **Set View by Drawing Center:** Several controls were added to make it easy to save, load and delete “cameras” with preset viewing angles.

**Repeat Last Command (F3) and Undo:** DesignCAD no longer stores the various **Zoom** commands in the **F3** and **Undo** command buffers. This makes it easier to repeat drawing commands even if a **Zoom In** or **Zoom Out** was necessary. All **Zoom** commands can still be undone separately using **Zoom Previous**.

**Shading:** We made some slight improvements to the antialiasing algorithm when using native Phong or Gouraud shading.

**Sweep:** Previously, the original profile used to generate the sweep was left separate from the swept object, with the assumption that you might want to re-use it for some other purpose. Now, the profile becomes part of the swept solid. A new **“Keep Original”** option has been added to retain a copy of the profile if you want to use that profile again.

**Dashed Lines Display improvement :** For dashed lines, DesignCAD now makes sure that there are no empty gaps at the beginning or end of a line segment for line styles other than Solid.

### Bug Fixes:

**DWG/DXF export:** A bug was fixed which caused an “invalid symbol table name” error if there was a space at the beginning of the layer name or at position 32.

**Animation export to AVI:** A bug was fixed which prevented shaded (Phong or Gouraud) AVI animations from being exported. A bug which could cause a crash when exporting long animations to AVI was also fixed.

**Fillet:** A bug was fixed which prevented the Fillet command from filleting a corner with a radius exactly equal to the length of the shortest filleted edge.

**Rotate:** A bug was fixed which prevented the Drag increment from being used when a click-and drag operation was performed (i.e. depress the mouse button to set the first point, keep holding the mouse button down as you drag, then release it at the end).

**View settings:** Several discrepancies were corrected between the operation of view tools in Model space and Paper space.

**Coordinate Bar:** The ability to **Cut, Copy** and **Paste** in the coordinate bar’s numeric fields has been restored.

**Print Preview:** A ruler display problem when previewing multiple tiles was corrected; previously the ruler did not update to account for the overall length and height of the tile array.

**Gradient Hatches:** A bug that caused the number of gradient hatch definitions to multiply unintentionally was corrected. *For drawings that already have an excess of gradient hatch patterns, those will have to be deleted manually; however, the new fix will prevent further unwanted proliferation of gradient patterns.*

**Blocks:** A bug was fixed which prevented the contents of blocks from mirroring properly.

### BasicCAD:

**Sweep:** The <Sweep command has a new parameter:

<KeepOriginalProfile [kp] 0 = don’t keep, 1 = keep.

This parameter matches (and sets) the new “Keep original” checkbox in the Sweep dialog.

```
>Plane
{
  <Color 0,255,0
  <Layer 1
  <LineStyle 7,1.0000,0.0000
  <PointXYZ 0.1659,13.5168,0
  <PointXYZ 6.2475,6.1125,0
  <PointXYZ 1.0547,-2.6574,0
  <PointXYZ 17.8402,-4.8667,0
  <PointXYZ 23.0263,7.8308,0
  <PointXYZ 16.0919,19.0531,0
  <Type 2
}

>PointSelect
{
  <PointXYZ 1.0546,-2.657,0
  <Type 0
}

>Sweep
{
  <PointXYZ -18.3809,-2.9346,0
  <NCopy 12
  <Angle 120
  <Offset 0.0000
  <Velocity 0.0000
  <Axis 1
  <KeepOriginalProfile 1
}
```

**ConvertDoubleLineToVector:** This new command requires no parameters; it converts the selected double lines to vectors, with the line styles of the resulting vectors determined either by the current line style, or by the layer line style (if any) if “Line style by Layer” is currently active.

```
<ConvertDoubleLineToVector
{
}
```