

*DESKARTES*



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*INDUSTRIAL DESIGN SYSTEM*

*UPDATE NOTES*

*CHANGES FROM VERSION 4.5 TO 4.6*

## ***Update Manual***

for the release of DESKARTES v. 4.6, April 2009.

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## *Foreword*

This Update Manual describes the changes of the *DESKARTES Industrial Design System* from the release of version 4.5 in March 2005 to the version 4.6 in April 2009.

New functionality has been implemented in particular in the following areas:

- Saving and restoring views
- Object positioning along a curve on another surface
- Optional secondary ExTrace program with classic lighting model and traditional batch process behavior
- License installation through the program Version Info window

Only those functional changes are reported that significantly change the operation or add new features to the system. Additionally there are some bug fixes and other improvements, which are not mentioned separately.

## *New Functionality*

### *Saving and restoring views*

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The view save/restore feature allows you to save the current view of the model in the graphics window, and to restore later that same view.

The views are saved in a list and you can give a name for each view for easier remembering.

The list of views can be also used for simple “fly by” animation by showing them in a sequence. The animation function automatically creates additional views between the views in the list for smoother movement.

The active clipping planes are also saved with the view, so it is possible to create an animation where only the clipping is changed, instead of changing the point of view.

The list of the saved views and the commands to handle them are shown in the **Views** window. You can open that with the command `DISPLAY⇒ Views: Save/Restore`.

The list of views is saved automatically during a session of IDS, so closing the **Views** window does not delete the list. If you want a list to be saved between IDS sessions, you have to save it into a file using the “**Save view set**” command in the **Views** window.

New command DISPLAY⇒View: Save/Restore

Select this command to show the **Views** window for view save/restore commands.



## *View Save/Restore functions*

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<b>Move Up</b>	Move the selected view up in the list. To change the order of the views for the animation.
<b>Move Down</b>	Move the selected view down in the list. To change the order of the views for the animation.
<b>Add</b>	Store current view from the graphics window to the list.
<b>Delete</b>	Remove the selected view from the list.
<b>Rename</b>	Rename the selected view.
<b>Apply</b>	Apply the selected view to the graphics window.
<b>Animate</b>	Apply all the views from the list in a sequence. The parameters <b>Frames between</b> and <b>Frames/s</b> can be used to adjust the animation.
Frames between	The number of additional views that the animation function automatically creates between the views in the list for smoother movement.
Frames/s	The number of views shown per second (if possible). The views possibly automatically created by the animation function, between the views in the list, are also included in this calculation.
<b>Save view set</b>	Save the views from list into a file.
<b>Load view set</b>	Load a set of views from a file into the list.
<b>CLOSE</b>	Close the <b>Views</b> window. (Does not delete the list.)

**Note:** There are some restrictions for the view save/restore feature in the **Four** views mode. If you are in the Four views mode when selecting the **Add** command, only the 3D view is stored. The **Apply** command also automatically changes the view mode to **Whole**, if in the **Four** views mode.

## Object positioning along a curve on another surface

The Paste to surface curve function allows you to define a curve on a (target) surface and then paste copies of an object (another surface) along that curve.

Orienting the surface happens so that the source object's (surface's) Z direction will be turned to the normal direction of the target surface.

The source object can be either a parametric surface or a faceted one. The target surface must be a parametric surface.

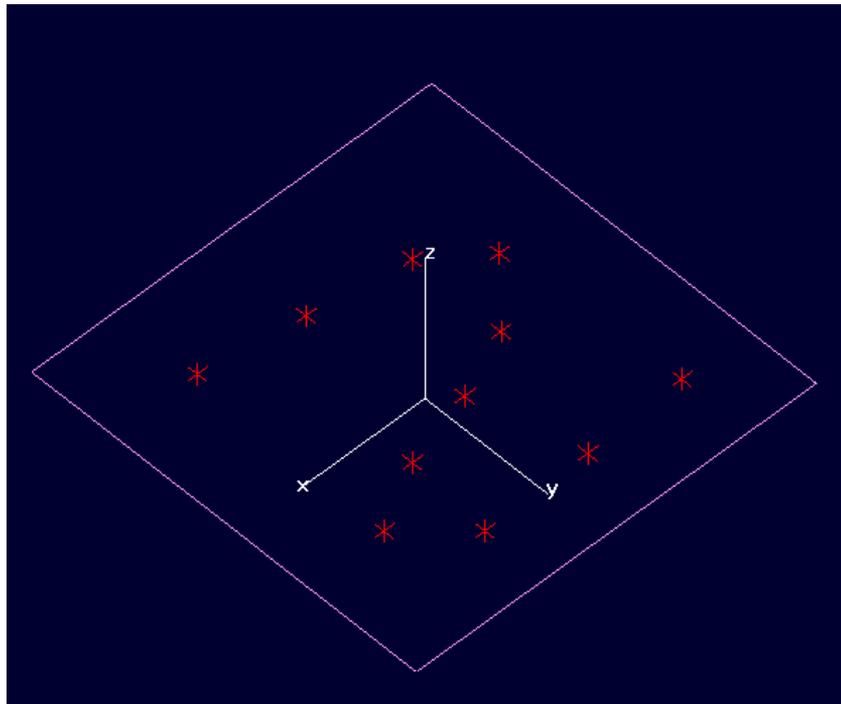
The source object (surface) is taken from the cut buffer, so you need to first use the command `OBJECT⇒ Cut` for that object to be able to execute the function.

Then select the target surface in the **Objects** window.

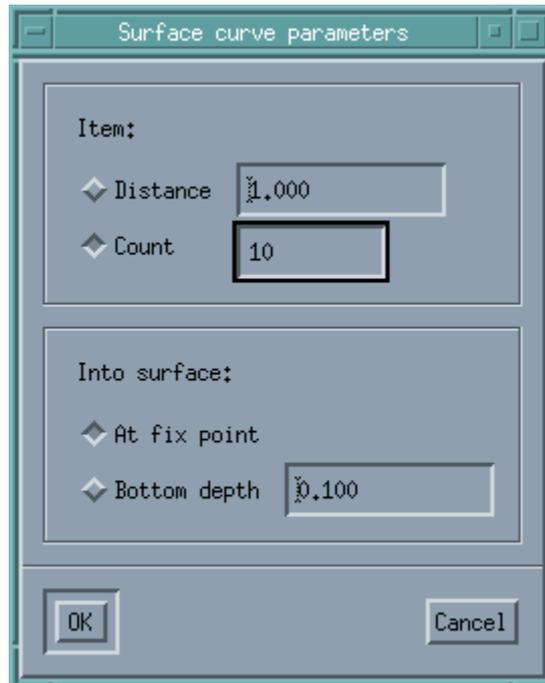
The actual function is then started with the command `SURFACE⇒ Deform: Paste to Surf Curve`.

## New command `SURFACE⇒ Deform: Paste to Surf Curve`

When started the command goes in the curve point input mode where you can define the curve. Add points by clicking the Left mouse button on top of the target surface and then click the Right mouse button when ready. While adding the points, they are shown as red cross markers. With the Middle mouse button you can delete the latest added point.



When the curve is defined the function shows a parameter window where you can define how the positioning is done.



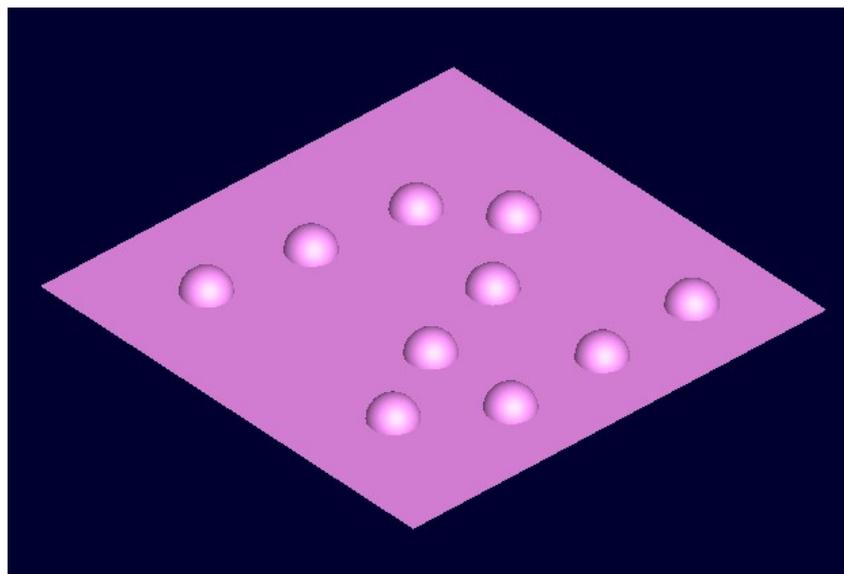
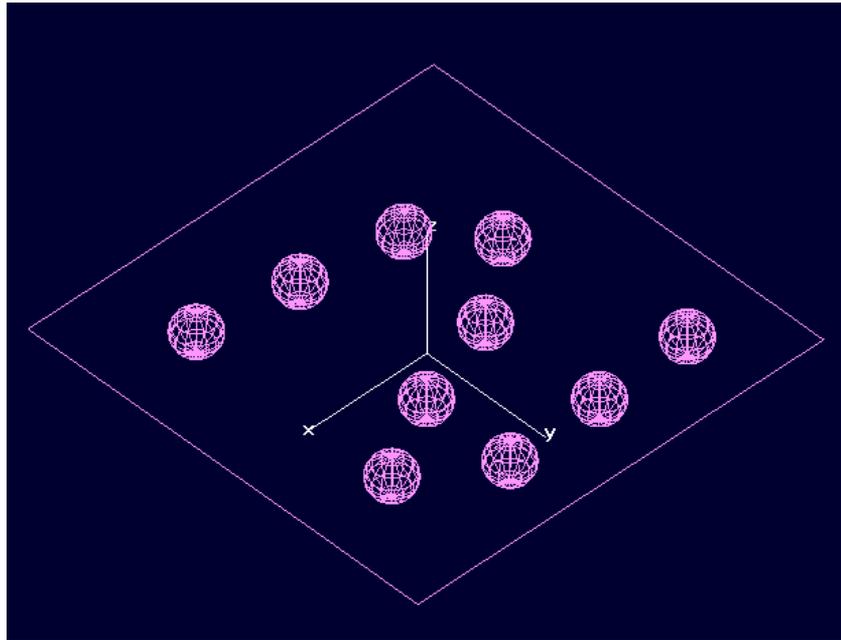
The amount of the items on the curve can be defined in two different ways:

- |          |  |
|----------|--|
| Distance | The distance between two consecutive objects on the curve. The amount of the objects depends on the length of the curve.                                   |
| Count    | The amount of the objects on the curve. The objects are positioned at equal distances from each other, so the distance depends on the length of the curve. |

The positioning of the objects related to the target surface has two options:

- |              |  |
|--------------|--|
| At fix point | The fix point of the object is positioned to the curve point on the target surface.                                    |
| Bottom depth | The bottom of the bounding box of the object is positioned the amount of the parameter value below the target surface. |

After the parameters are defined press the OK button and the function will then execute the copying and positioning of the object.



## Secondary ExTrace program

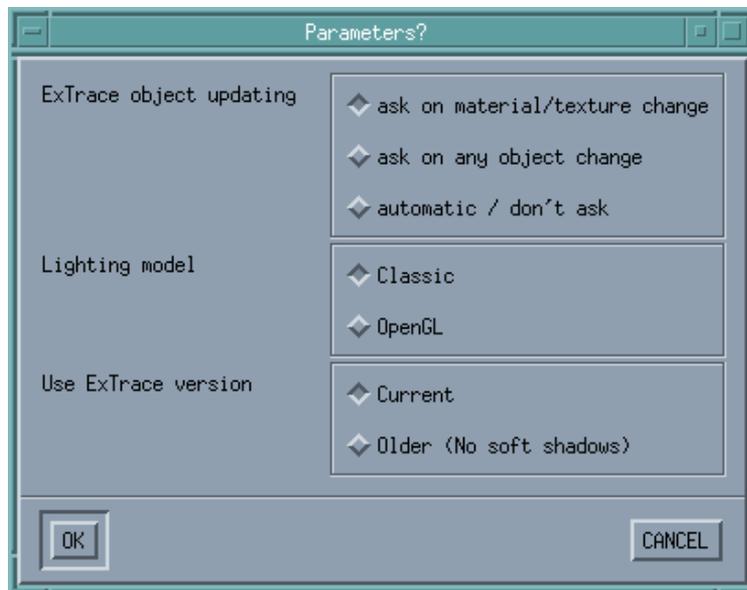
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A secondary ExTrace program with classic lighting model and traditional batch process behavior is available.

If the model is created for classic lighting mode and the traditional batch process behavior, with faster update of the image file, is needed, then the secondary ExTrace program might be preferable.

The secondary ExTrace program is based on the ExTrace version 4.4, so it contains only the Classic lighting model and therefore does not support the soft shadows either.

The used ExTrace version is chosen in the ExTrace general settings dialog (EXTRACE⇒ Prefs: General).



The **Current** ExTrace version is the latest one available. In this version of IDS it is 4.6. It contains the support for soft shadows and both Classic and OpenGL lighting models. The Lighting model selection is valid only if this ExTrace version is used.

The **Older** ExTrace version is based on the ExTrace version 4.4. It does not support the soft shadows and only supports the Classic lighting model. When run as a batch process the image file is updated faster than in newer ExTrace versions, with soft shadow support.

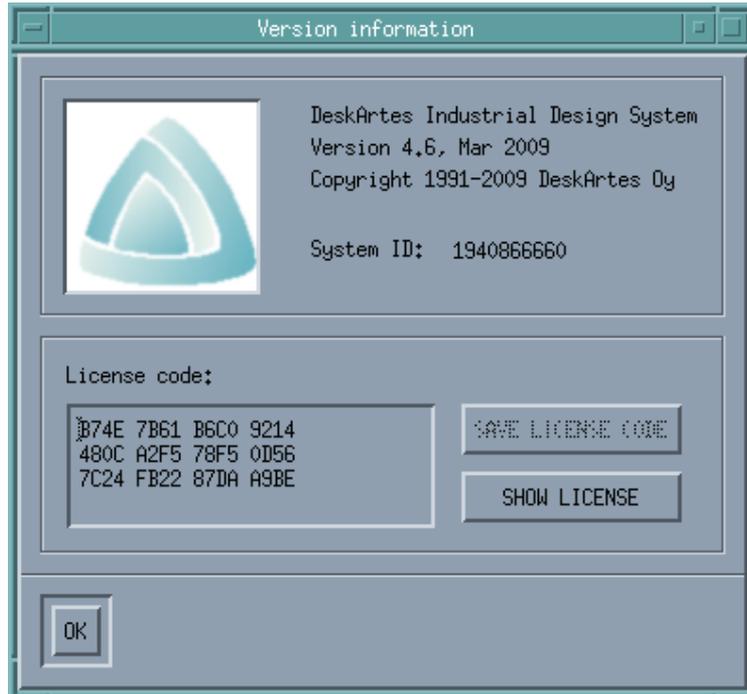
**Note:** After changing the ExTrace version in the ExTrace general settings you have to restart IDS to get also the material editor ExTrace window and on-screen ExTrace window to run that selected version. The ExTrace batch processes that are started after the settings change will however directly use the selected version.

The ExTrace settings that are related to the rendering are moved from the general settings dialog to a separate ExTrace rendering settings dialog (EXTRACE⇒ Prefs: Rendering).



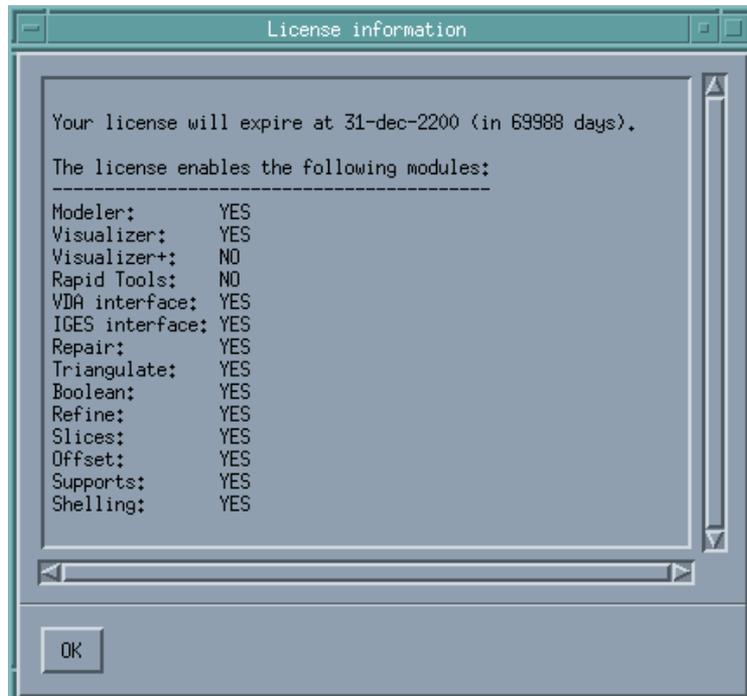
## License installation through Version Info window

The license code can be installed directly inside the program in the version info window (SYSTEM⇒ Version Info).



The license code can be copied or typed in the **License code** field of the version info window. When a new code is added it can be saved into file by clicking the **SAVE LICENSE CODE** button.

The contents of the license can be shown with the **SHOW LICENSE** button.



The license installation through the version info window stores the license code in the file with the same location and name as before: the **dalic.<systemid>.txt** in the **System** directory under the IDS installation directory (default: "C:\DA\System\dalic.<systemid>.txt").

This means that the license code can also be installed manually, following the older instructions, if needed.