

progeCAD Render



ProgeSOFT – CAD solution

Render Engine Artisan

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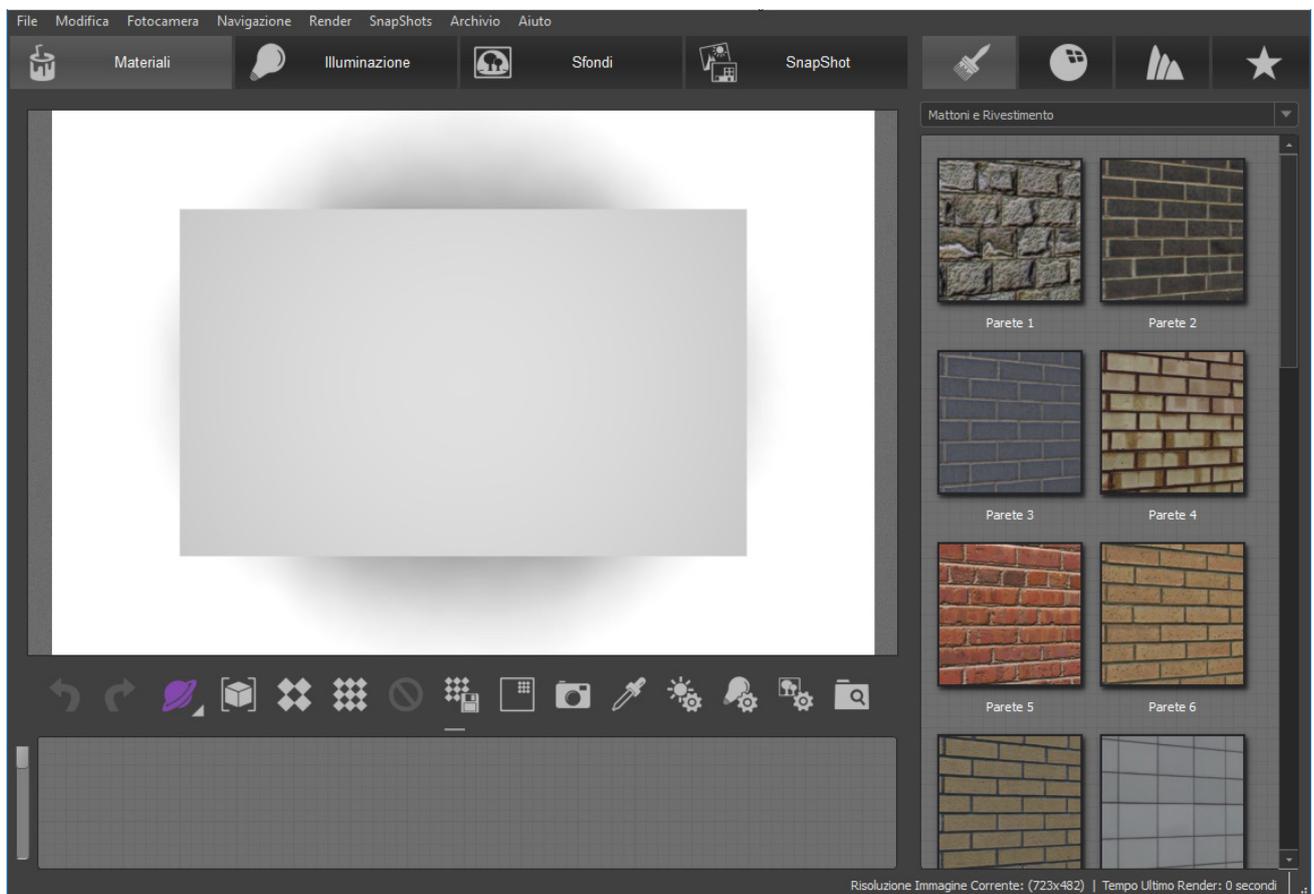
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Interface

The Artisan Interface consists of 7 different sections. These have been colour coded and highlighted on the image below:

Keyword	Definition
Menu Bar	The Menu Bar can be used to access a variety of features through drop-down lists.
Tab Bar	The Tab bar contains tabs for navigating between tasks in Artisan.
Sub-Tab Bar	The Sub-Tab bar contains tabs for navigating between tasks in Artisan.
Render Window	The Render Window holds your current scene.
Content Panel	The Content Panel stores materials, lighting schemes and backgrounds.
Toolbar	The Toolbar contains buttons for performing various tasks within Artisan.
SnapShots Panel	The SnapShots Panel stores all the SnapShots you have taken.



Menu Bar

File

- *Save (Ctrl+S)*: Saves the current session and SnapShots to disk.
- *Exit (Alt+F4)*: Closes Artisan.

Edit

- *Undo (Ctrl+Z)*: See [Toolbar](#) section.
- *Redo (Ctrl+Y)*: See [Toolbar](#) section.
- *Reset Session*: Resets the current session back to state it was when started.
- *Preferences*: See [Preferences](#) section.

Camera

- *Lens*: Sets the camera's focal length.
- *Aspect Ratio*: Sets the image width and height.
- *Up Vector*: Defines which axis is pointing up.
- *Orientation*: Sets the image orientation to either portrait or landscape.
- *Animations*: Rotates the model in real time.
- *Reset Camera*: Resets the camera position and orientation to the state upon starting the session.

Navigation

- *Examine (O)*: See [Navigation](#).
- *Explore (W)*: See [Navigation](#).
- *Drag*: See [Navigation](#).
- *Look*: See [Navigation](#).
- *Track*: See [Navigation](#).
- *Fit to Model*: See [Navigation](#).
- *Standard Views*: Moves the camera to set positions around the model.

Render

- See [Rendering Controls](#)
- *launch Render Monitor*: Opens the Render Monitor application, to look at tasks being rendered using Network Rendering.

SnapShots

- *Create SnapShot*: Takes a SnapShot of the current scene.
- *Delete All SnapShots*: Deletes all the current SnapShots.
- *Show Files*: Opens the folder where the SnapShot files are stored.
- *Print All SnapShot Renders*: Prints all high quality renders that are attached to the SnapShots.

- *Print All Interactive Renders*: Prints all interactive renders that are attached to the SnapShots.

Archive

- *Import*: Imports an archive from file.
- *Add All Materials*: Adds all materials in a scene to an archive.
- *Add Background*: Adds the current background to an archive.
- *Add All SnapShots*: Adds all SnapShots to an archive.

Help

- *Help (F1)*: Opens the help documentation
- *About*: Displays program information, version number and copyright.

Tabs

Materials

- *Materials*: Contains full material definitions, including: colour, finish and bump components. Applying a material will completely override the material applied in the CAD application.



- *Finishes*: Contains reflectance and transparency properties such as mirror or glass.



- *Bumps*: Makes a surface appear rough or to have a pattern based on different heights on the surface.



- *Material archives*: Create an archive containing materials used in your model.



- *Finish*: Specifies which finish is applied.
- *Bump*: Specifies which bump map to use.
- *Geometry*: Allows geometry to be hidden in order to allow material editing of obscured geometry.

* *This feature is not included in the Artisan Undo and Redo system.*

Lighting

- *Architectural*: Weather based lighting schemes designed for use when rendering views of architectural models.



- *Product*:



- *Natural Lighting*: 360-degree HDR images of real exteriors and interiors providing natural lighting and reflections.
- *Studio Lighting*: Photographer's studio setups using HDR lighting.
- *Softbox Lighting*: Even and diffused lighting schemes.

Backgrounds

- *2D Scenes*:



- *Interior*: Photographic 2D backgrounds suitable for situating models in an interior and exterior environment.

- *3D Scenes*: 360-degree spherical panoramas representing different weather effects and skies.



- *Background Archives*: Allows you to store your favourite backgrounds in an archive. This is particularly useful if you make use of custom backgrounds; for example image backgrounds.

SnapShots

- *SnapShots*: Provides tools to set different aspects of quality for the current render and for the SnapShots that you have defined.
- *SnapShot Archives*: Enables you to share SnapShots across models.



Toolbar

- *Undo (Ctrl+Z)*: Undo changes made to the current session.



progeCAD Render

- *Redo (Ctrl+Y)*: Cancel any undo.



- *Examine (O)*: See [Navigation](#) Controls.



- *Explore (W)*: See [Navigation](#) Controls.



- *Drag*: See [Navigation](#) Controls.



- *Look*: See [Navigation](#) Controls.



- *Track*: See [Navigation](#) Controls.



- *Fit to Model*: See [Navigation](#) Controls.



- *Preview Render*: See [Rendering](#) Controls.



- *Full Render*: See [Rendering](#) Controls.



- *Cancel Render*: See [Rendering](#) Controls.



- *Save Last Render to File*: See [Rendering](#) Controls.



- *Render to Sub-Image*: See [Rendering](#) Controls.



- *Create Snapshot*: See [Rendering](#) Controls.



- *Edit Background*:



- *Texture*: Supply your own image as a background.

- *Gradients*: Change colours when current background is graduated.
- *Edit Light Position*: provides tools for positioning the sun and environment.
 - *Sun Height*: Set the height of the sun above the horizon.
 - *Sun Rotation*: Set the rotation of the sun
 - *Edit Lighting Position*: Rotate the 3D background, lighting image and reflections on your model.



- *Edit lighting*: The balance between ambient, artificial and studio lighting can be adjusted. In addition, the shadow properties can be edited.



- *Lighting*
 - *Use artificial lighting*: Controls whether application defined artificial lights will be included in the rendered image.
 - *Artificial intensity scale*: Increases or decreases the effect of all the application-defined lights.
 - *Ambient intensity scale*: Increases or decreases the level of ambient lighting in the image.
- *Reflected Environment*
 - *Reflect Image*: By default, reflections will match the HDR Image used in the lighting scheme. It is possible to override the image that is reflected.
 - *File name*: The location of the file being used.
 - *Intensity Scale*: Sets the reflection intensity to alter the power of the reflection.
 - *Reflect Current Background*: Lighting scheme reflections are ignored. Instead, the current background is reflected.
- *Lighting Detail*
 - *Model Size*: Reduce this if you are viewing the model close-up or are viewing a single room in a larger building and the lighting quality is not sufficient.
- *Shadows*

- *Drop Shadow*: Controls whether a drop shadow is displayed under the model
 - *Shadow Quality*: Sets the sample quality of the drop shadow.
 - *Contrast*: Sets the brightness of the drop shadow.
- *Sun Shadow*: This check box controls whether or not a shadow is cast from sun or from the spot lights (if defined on the light studio).
 - *Brightness*: Sets the intensity of the shadows.
- *Reflection*: Controls whether the model is reflected in the base plane.
 - *Brightness*: Makes the reflection appear brighter or darker
 - *Blur*: Makes the reflection more or less distant
- *Select Paint material*: Click on Select Paint Material then left click on the material you wish to copy. With the Select Paint Material tool active, right click to paste the copied material.

Navigation

- *Examine (O)*: Left Mouse Button moves the camera around the model.

- *Explore (W)*: Left Mouse Button walks the camera towards and away from the model whilst looking left and right.

- *Drag*: Left Mouse Button moves the camera up, down, left and right without changing its direction.


- *Look:* Left Mouse Button moves the cameras direction without changing its position.



- *Track:* Left Mouse Button walks the camera toward and away from the model, as if on a rail.



- *Fit to Model:* Moves the camera so the entire model can be seen in the render window.



- *Mouse Wheel:* Scroll will track. Press and hold will drag.
- *Spacebar:* Fits the camera to model extents.
- *Shift+ Spacebar:* Moves the camera to centre of the model.
- *Left Mouse Button + Right Mouse Button:* Held at the same time will drag.

Rendering and SnapShot Controls

Rendering Controls

- *Preview Render:* Renders the scene using the Preview Render quality settings that can be set in Edit > Preferences. By default, these are set low to produce an image faster.



- *Full Render:* Renders the scene using the Full Render quality settings that can be set in Edit > Preferences. By default, these are set high to produce a high quality image.



- *Cancel Render:* Stops an in progress Preview Render or Full Render. This does not remove the image from screen until the scene changes.



- *Save Last Render to File:* Saves the last Preview Render or Full Render to a file.



SnapShot Controls

- *Create SnapShot:* Create a SnapShot of the current scene (camera, materials, lighting and background) for rendering later.



- *Show in Explorer*: Opens the directory where the Snapshots are stored.



Preferences

- *Preferences*: Options to change the general settings for Artisan, the OpenGL render settings and the software render settings

- *General*

- *Textures Folder*: Add a location(s) to search for textures used in custom materials. Multiple folders should be separated by semicolons. Use this if you have physically moved the texture files after creating a custom material.
- *Language*: Sets the language for Artisan. By default this is set to your Operating Systems language. A restart is required if you make a change to the current selection.

The supported languages in Artisan are:

- English (UK)
- German
- Spanish
- French
- Italian
- Japanese
- Korean
- Polish
- Portuguese
- Russian
- Chinese (Simplified)
- *Model Style*: Sets the lighting and background for new models. This option does not need to be changed every time

you open Artisan, it is meant to help if you always open one type of model.

- *Icon Size*: Sets the size of the icons used in the right tabs.
- *Real-Time*
 - *Quality*: Sets the quality of the real-time preview. Higher values display a more accurate image, while lower values increase performance.
 - *Use High Resolution Textures*: Untick this to reduce memory used by your video card. It does not affect software rendering.
 - *Enable real-time shadows*: Enables shadows in real-time. Untick this to increase your frame rate.
- *Software Render*
 - *Render Quality*: See [render quality](#) settings
- *Reset All*: Resets the current settings back to its original state. Requires a restart of Artisan.

Hotkeys

- *Ctrl-S*: Save
- *Alt-F4*: Exit
- *Ctrl-Z*: Undo
- *Ctrl-Y*: Redo
- *O*: Examine
- *W*: Explore
- *F1*: Help

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Applying a material to an object

Artisan makes applying a material easy, with a drag-and-drop mechanism that will replace the CAD application texture and/or colour. This will give you photorealistic quality materials in a few mouse clicks.

To apply a material to an object:

1. Select the **Materials** tab from the tab bar.



2. Select the **Materials** tab from the sub-tab bar on the right hand side.



3. Choose a material group from the drop-down menu then find the material you want to apply from the content panel.
4. Click and hold down the left mouse button on the material, then drag it onto the model.
5. Release the left mouse button and the material will be applied to the part of the model under the cursor.

You can change the properties of a material on the model by right clicking on it then choosing Edit Material.

Applying a Background to a scene

Artisan offers the ability to apply a number of pre-defined backgrounds to your scene.

To apply a background to a scene:

1. Select the **Backgrounds** tab from the tab bar.



2. Select the **2D Backgrounds**, **3D Backgrounds** or **Archives** tab from the sub-tab bar on the upper right hand side.



3. Choose a background group or Archive from the drop-down menu.
4. Find a background you want to apply from the content panel.
5. Click and hold down the left mouse button on the background, then drag it onto the render window.
6. Release the left mouse button and the background will be applied to the scene.

You can change the properties of a background by clicking the Edit Background button in toolbar.



Applying a Lighting Scheme

Artisan offers pre-defined lighting schemes. These vary in complexity and accuracy to give you the most realistic looking lighting for your scene.

To apply a lighting scheme to a scene:

1. Select the **Lighting** tab from the tab bar.

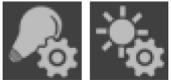


2. Select the **Architectural**, or **Product** tab from the sub-tab bar on the upper right hand side.



3. Choose a lighting group from the drop-down menu then find the lighting you want to apply from the content panel.
4. Click and hold down the left mouse button on the lighting scheme, then drag it onto the render window.
5. Release the left mouse button and the lighting scheme will be applied to the scene. This can take some time depending on the complexity of the scheme.

You can change the properties of a lighting scheme by clicking the *Edit Lighting* or *Edit Light Position* buttons in the toolbar.



Creating and applying a SnapShot

SnapShots store all the data from your scene, so you can quickly and easily recreate it. SnapShots mean that you can make and save changes to an old scene without having to recreate it from scratch.

To create a SnapShot of a scene:

1. Click on the **Create SnapShot** button in the toolbar. The SnapShot will appear in the SnapShots panel.



To apply a SnapShot:

1. Click and hold down the left mouse button on a SnapShot in the SnapShots panel.
2. Drag the SnapShot onto the render window then release the left mouse button and the SnapShot will be applied to the scene. This can take some time depending on the lighting scheme and shadows within the SnapShot.

You can create Archives of your SnapShots by highlighting them in the SnapShots panel, right clicking and selecting 'Add SnapShot to Archive'. You can then use these with other models to apply individual aspects or the whole SnapShot.

Rendering a SnapShot

Artisan offers you two ways to render an image. You can render a SnapShot or set of SnapShots, or you can render progressively in the render window and save the image that is produced.

To render a SnapShot or sets of SnapShots:

1. Select the **SnapShots** tab from the tab bar.



2. If not already active, select the **Render** tab from the sub-tab bar on the upper right hand side. This will change the content panel to show options for rendering SnapShots.



3. Click on the SnapShot that you would like to render from the SnapShot panel. When the SnapShot is selected, a blue border will appear around the image.

To render more than one SnapShot, you can hold the Shift key and click on more SnapShots to highlight a series, or hold the ctrl key down to add individual SnapShots. Another way to select multiple SnapShots is to hold the left mouse button down in the space around the SnapShots then drag a selection box over the ones you want to render.

4. Change the render options in the content panel to your preferences:
 - o Change the file type by choosing one from the **Output Format** drop-down menu.
 - o Change the image resolution by choosing a size from the **Longest Side (pixels)** drop-down menu, or by entering your own value. The shortest side will be calculated based on the aspect ratio of the SnapShot.

To change the aspect ratio of a SnapShot, apply the SnapShot to the scene, change the aspect ratio using the menu bar item 'Camera > Aspect Ratio' then create a new SnapShot using the Create SnapShot button.

- o Set the render, material and lighting quality by changing the values in the corresponding drop-down menus.

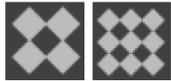
Choosing the quality value 'SnapShot' will take the last known setting used for each SnapShot.

5. Click on the **Render Selected SnapShots** button.

6. The results of the rendering process will be delivered into the SnapShots folder beside your CAD model file. You can access the images quickly by double clicking each SnapShot in the SnapShot panel, or by clicking the **Show Files** button.

To perform a progressive render in the render window:

1. Click on either the **Preview Render** or the **Full Render** button in the toolbar.



The Preview Render and Full Render qualities can be set by choosing Edit > Preferences, then by selecting the Software Render tab.

2. Rendering will take place in the render window with the image becoming clearer as it progresses. You can stop the rendering process at any time by clicking on the **Cancel Render** button.



To save your Preview or Full render:

1. After the scene has been rendered on screen, click on the **Save Last Render to File** button in the toolbar.



2. Specify the file location to save the render to, and then click **Save**.

Speeding up Artisan

Artisan uses different parts of your computers hardware for different operations. You can increase Artisan's performance by upgrading certain parts of your computer.

Although not always the case, as a general rule:

- To improve the speed at which you navigate the render window, you can upgrade your graphics card.
- To improve the speed of renders, you can upgrade your processor.

- To improve the speed at which large CAD models are loaded into Artisan, you can increase the amount of memory in your computer.

Create your own materials

Artisan allows you to create your own materials and apply these to your model. This allows you to create truly unique models that are customised to your exact specifications.

To create a material:

1. Select the **Materials** tab from the tab bar.



2. Select the **Materials** tab from the sub-tab bar on the upper right hand side.



3. Choose the **User Defined** material group from the drop-down menu.
4. Click and hold down the left mouse button on the Texture or Filter Texture materials, then drag it onto part of the model.

Filter Texture is for grey scale textures that take on the colour you choose.

5. Release the left mouse button and the custom texture place-holder will be applied to the part of the model under the cursor.
6. Right click on the custom texture place-holder that has been applied to your model, and choose **Edit Material** from the drop-down list.
7. Click on the **Edit** button then navigate to your texture in the file explorer window.

Artisan supports .bmp, .jpeg, .lgi, .tga, .png, and .tif file formats.

8. Click on **Open**.
9. Change the material options in the Edit Materials panel to your preferences.

For more information on what the options do, see Edit Materials.

10. Click **OK** and your custom texture will be applied to the geometry of the model.

Changing the Finish on your Material

Artisan allows you to change the finish that is applied to a material. Finishes add reflectance and transparency properties, which can result in a more realistic looking material.

To change the finish:

1. Select the **Materials** tab from the tab bar.



2. Select the **Finishes** tab from the sub-tab bar on the upper right hand side.



3. Choose a finishes group from the drop-down menu then find the finish you want to apply from the content panel.
4. Click and hold down the left mouse button on the finish, then drag it onto part of the model.
5. Release the left mouse button and the finish will be applied to the part of the model under the cursor.

Applying part of your scene to a SnapShot

You can apply materials, lighting schemes, backgrounds and camera settings from your current scene to your other SnapShots.

To apply part of a scene to a SnapShot:

1. Right click on a SnapShot in the SnapShots panel.
2. Choose **Update SnapShot** from the drop-down menu.
3. Choose your preference to apply to the SnapShot:
 - **Materials** will update the SnapShot with the materials from the current scene.
 - **Lighting** will update the SnapShot with the lighting scheme from the current scene.
 - **Background** will update the SnapShot with the background from the current scene.
 - **Camera** will update the SnapShot with the camera settings from the current scene.

- **All** will update the SnapShot with materials, lighting, camera settings and backgrounds from the current scene.

Updating the content of a SnapShot will not update it's icon. You can apply the SnapShot after you've made the changes and create a new SnapShot if you need to update the icon.

Applying part of a SnapShot to your scene

Artisan allows you to apply materials, lighting schemes, backgrounds and cameras from other SnapShots to your current scene. This means you can try different scene setups quickly and easily.

To apply part of a SnapShot to your scene:

1. Right click on a SnapShot in the SnapShots panel.
2. Choose **Update Current Scene** from the drop-down menu.
3. Choose your preference to apply to your scene:
 - **Materials** will update the scene with the materials from the selected SnapShot.
 - **Lighting** will update the scene with the lighting scheme from the selected SnapShot.
 - **Background** will update the scene with the background from the selected SnapShot.
 - **Camera** will update the scene with the camera settings from the selected SnapShot.
 - **All** will update the scene with materials, lighting, camera settings and backgrounds from the selected SnapShot.

Rendering part of the scene using Sub-Image rendering

Artisan offers you the ability to render any chosen part of your scene as a high-quality image. This means you can, for example, view a new material you have applied to your model without rendering the entire scene.

To render a part of your scene:

1. Click on the **Render to Sub-Image** button in the toolbar.



2. Move the mouse cursor onto the render window.
3. Click and hold down the left mouse button on part of the scene, then drag it to over the area you wish to render.

Rendering will begin automatically when you have selected your area, using the “Full Render” quality settings. To stop using Sub-Image rendering, click the Sub-Image Render button again.

Creating an Archive of Materials

Artisan allows you to add your materials to an Archive that can be accessed any time within Artisan, or exported to a location on your computer. With Archives, Artisan makes storing and sharing your materials easy.

To add all the materials in your scene to an Archive:

1. Click on the **Archive** menu bar item.
2. Choose **Add All Materials** from the drop-down menu.
3. Click on your preference in the dialog:
 - To create a new Archive to store materials in, click on **Create** then enter a name for the new archive.
 - To add materials to an existing Archive, select the Archive from the drop-down menu and click **Add**.

To add a specific material in your scene to an Archive:

1. Right click on the geometry of your model that has the material applied you would like to add to an Archive.
2. Choose **Add Material to Archive** from the right click menu.
3. Click on your preference in the dialog:
 - To create a new Archive to store materials in, click on **Create** then enter a name for the new Archive.
 - To add materials to an existing Archive, select the Archive from the drop-down menu and click **Add**.

You can access a materials Archive by selecting the Materials tab, then by selecting the Archives tab from the sub-tab bar on the upper right hand side. After this, select an Archive to

access from the drop-down menu.



Creating an Archive of Backgrounds

Artisan allows you to add your backgrounds to an Archive that can be accessed any time within Artisan, or exported to a location on your computer. With Archives, Artisan makes storing and sharing your backgrounds easy.

To add the background in your scene to an Archive:

1. Click on the **Archive** menu bar item.
2. Choose **Add Background** from the drop-down menu.
3. Click on your preference in the dialog:
 - To create a new Archive to store backgrounds in, click on **Create** then enter a name for the new Archive.
 - To add backgrounds to an existing Archive, select the Archive from the drop-down menu and click **Add**.

You can access a backgrounds Archive by selecting the Backgrounds tab, then selecting the Archives tab from the sub-tab bar on the upper right hand side. After this, select An Archive to access from the drop-down menu.



Creating an Archive of SnapShots

Artisan allows you to add your SnapShots to an Archive that can be accessed any time within Artisan, or exported to a location on your computer. Archives make storing and sharing your SnapShots easy.

To add SnapShots to an Archive:

1. Click on the **Archive** menu bar item.
2. Choose **Add All SnapShots** from the drop-down menu.
3. Click on your preference in the dialog:

- To create a new Archive to store SnapShots in, click on **Create** then enter a name for the new Archive.
- To add SnapShots to an existing Archive, select the Archive from the drop-down menu and click **Add**.

To add a specific SnapShot to an Archive:

1. Right click on a SnapShot in the SnapShots window.
You can select more than one at a time by holding down the Ctrl key and clicking on multiple SnapShots.
 2. Choose **Add SnapShot to Archive** from the drop-down menu
 3. Click on your preference in the dialog:
- To create a new Archive to store SnapShots in, click on **Create** then enter a name for the new Archive.
 - To add SnapShots to an existing Archive, select the Archive from the drop-down menu and click **Add**.

You can access a SnapShots Archive by selecting the SnapShots tab, then selecting the Archives tab from the sub-tab bar on the upper right hand side. After this, select an Archive to access from the drop-down menu.



Exporting and importing Archives or content packs.

Artisan allows you to export Archives that you have created to a location on your computer. You can also import Archives into Artisan. This means you can easily store and share parts of your scene.

To export an Archive:

1. Select the **Materials**, **Backgrounds** or **SnapShots** tab.
2. Select the **Archives** tab from the sub-tab bar on the upper right hand side.

3. Choose an Archive group from the drop-down menu.
4. Click on the **Export Archive** button at the bottom of the content panel.
5. Navigate to the folder you would like to save to in the file explorer window, then enter a name and click on **Save**.

To import an Archive or content pack:

1. Click on the **Archive** menu bar item.
2. Choose **Import** from the drop-down menu.
3. Navigate to and select your .lwz Archive in the file explorer window, then click **Open**.

Copying and pasting colours, finishes and bumps

Artisan offers you the ability to copy a material from one piece of geometry to another. This method will save you time and avoid you having to recreate materials each time.

To copy a material from one piece of geometry to another:

1. In the render window, move the mouse cursor over a piece of geometry to copy and right click.
2. Choose **Material** from the drop-down menu.
3. Click on your preference from the sub-menu:
 - To take a copy of the texture applied to this geometry, choose **Copy Colour**.
 - To take a copy of the bump map applied to this geometry, choose **Copy Bump**.
 - To take a copy of the finish applied to this geometry, choose **Copy Finish**.
 - To take a copy of the texture, bump map and finish applied to this geometry, choose **Copy**.
4. Move the mouse cursor over the piece of geometry you would like to paste to and right click.
5. Choose **Material** from the drop-down menu.
6. Click on the **Paste** button in the sub-menu.

You can reset the materials, bumps and finishes on a piece of geometry back to its imported state by clicking the Reset button in the sub-menu.

Alternatively, you can use the *Paint Material* tool.

Adding your own 2D background

Artisan allows you to add backgrounds using images from your computer to create bespoke scenes.

To create a Custom 2D background:

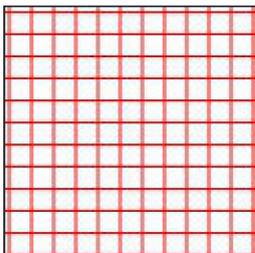
1. Select the **Backgrounds** tab.



2. Select the **2D Scenes** tab from the sub-tab bar on the upper right hand side.



3. Choose the **2D User Defined** group from the drop-down menu.
4. Click and hold down the left mouse button on the **Custom Image** background, then drag it onto the model.



5. Release the left mouse button and the place-holder background will be applied to your scene.
6. Click on the **Edit** button in the Edit Background dialog that appears, then navigate to your chosen image in the file explorer window.
7. Click on **Open**.

Artisan supports *.bmp*, *.jpeg*, *.lgi*, *.tga*, *.png*, and *.tif* file formats.

Hiding and Showing Geometry

You can hide specific parts of your model's geometry, allowing you to view and edit obscured geometry easily.

To hide part of your model from view:

1. Move the mouse cursor over the piece of geometry you would like to hide in the render window and right click.
2. Choose **Geometry** from the drop-down menu.
3. Click on **Hide** from the sub-menu.

This will stay hidden until you "Show All"

Showing files and images in your file explorer

By default, your renders are stored in a predefined directory in the same location as your CAD file.

To view your renders in the default file directory:

1. Click on the **Show Files** button in the toolbar.



Changing the size of the camera lens

Artisan allows you to mimic a camera lens by changing its size to alter the field of view. This means you can customise your viewports for more accurate rendered images.

To change your Cameras Lens:

1. Click on the Camera menu bar item.
2. Choose **Lens** from the drop-down menu.
3. Click on your preference of lens size from the list.

Changing the position of lights in your scene

You can change the position that the lights are cast from, allowing you to cast realistic looking shadows that mimic your backgrounds light position.

To change the position of the lights in your scene:

1. Click on the **Edit Light Position** button in the toolbar.



2. Choose your preferences from the dialog that appears:
 - o Adjust the **Sun Height** slider to change the vertical angle that sunlight is cast from.
 - o Adjust the **Sun Rotation** slider to change the horizontal angle the sunlight is cast from.
 - o Adjust the **Rotation** slider to affect how the the image based lighting and the image being reflected onto your model's surfaces.

Changing the side of your model that faces up

You can change the Up Vector of the model, this changes which side faces up.

To change the Up Vector:

1. Click on the **Camera** menu bar item.
2. Click on **Up Vector** from the drop-down list.
3. You can click on different axes to change which axis points up.

It may take a few moments for the changes to be applied as Artisan processes the difference in lighting.

Changing the colour of a material

A material will have a default colour, but you are able to change this (some materials cannot have their colour changed).

To change a materials colour:

1. Right click on the model where you want to change the colour and choose **Edit Material** from the drop-down menu.
2. Look for the Colour heading then click on **Edit**.
3. Choose the colour you would like then click **OK**.
4. Click **OK** on the Edit Material window.

How to effectively use lighting schemes

Lighting in Artisan is split into two categories, architectural and product. This guide describes what schemes to use in what situations, and how best to adjust them to fit your scene. For details on how to apply a lighting scheme, see [here](#).

Architectural

Architectural lightings schemes are divided up into two categories, interior and exterior. Interior lighting schemes are designed to offer softer lighting and shadows, where as exterior lighting offers darker shadows and stronger lighting to mimic the sun.

Both interior and exterior night take any lighting out of your scene except lights placed there within your cad application (if supported).

Interior

Interior lighting schemes should be used when rendering the interior of an architectural model. If you are looking into the interior of a model from the outside, you will still need to use an interior lighting scheme as this will appropriately light the area that you are looking to render.

Exterior

Exterior lighting schemes should be used when rendering the exterior of an architectural model. Again, you will need to use these schemes if you are looking to render a scene that shows the outside of a model from the inside. This will appropriately light the area that you are looking to render.

Product

The product lighting schemes are split into three sub categories: studio, natural and softbox. Studio lighting is designed to mimic the bright lights within a studio environment. Natural lighting is designed to mimic the lighting found in outdoor environments. Softbox lighting applies softer shadows to your scene (softbox lighting may not work well with certain materials).

Finally, within both categories you have the fast ambient and sun/distant lighting schemes. These are lower quality lightings schemes, designed for quick renders or lower performance computers.

Render quality settings

The quality of the materials, lighting and overall render can be adjusted in the Edit > Preferences dialog. This guide details the changes that will be made to your render by adjusting these settings.

The software render quality settings are divided into two sections, preview and full.

Preview Render

This defines the quality of the render when you press the 'Preview Render' button. By default, it is set to low, low, low to enable faster rendering of your scene.

Full Render

This defines the quality of the render when you press the full render button or you render your SnapShots to file in the SnapShots tab.

Render Quality

Increasing Render Quality will increase the effective resolution at which the image is created. Very thin object such as railings or the gaps between the components of a cupboard will require a higher render quality to appear correctly.

Lighting Quality

To bounce the light, Artisan estimates the amount of light reaching parts of the scene. Increasing the Lighting Quality means Artisan can produce more precise estimates and more accurate lighting effects.

Material Quality

Materials with a 'glossy' finish will take longer to render accurately. The 'Low' setting of Material Quality causes the 'glossy' effect to be switched off and replaced with a faster mirror-style reflectance. Higher setting of Material Quality cause an increasingly realistic blurring to be calculated.

Getting Started with Artisan

This getting started guide is designed to give you an overview of the Artisan workflow.

The [Help Documentation](#) and [User Guides](#) cover Artisan in more detail, explaining all the interface and features of the software.

This guide will cover the 4 most important steps of the Artisan workflow:

- **Step 1:** Adding materials, finishes and bump maps to your model
- **Step 2:** Choosing a Lighting Scheme for your model
- **Step 3:** Choosing a 2D or 3D background for your model
- **Step 4:** Creating and Rendering SnapShots of your model

Step 1: Adding materials, finishes and bump maps to your model

When you initially load Artisan, you can see your model in the render window. Above the render window is the tab bar. Each tab will be explained in each step of this guide, with the first tab being Materials.

To the right of the render window is the content panel. This panel contains different content (materials, lighting schemes and backgrounds) depending on which tab you currently have selected (in this step, it will be the Materials tab).

Below the render window you have the toolbar. This contains buttons for navigation, rendering, taking SnapShots, and editing scene settings.

See the [Interface](#) section for detailed information on the Artisan interface.

The first step in the Artisan workflow is to apply materials, finishes and bumps to alter the appearance of the model.

To apply a material to your model:

1. With the **Materials** tab selected from the tab bar, select the **Materials** sub-tab from the sub-tab bar on the upper right hand side.



2. Choose a material group from the drop-down menu then find the material you want to apply from the content panel.
3. Click and hold down the left mouse button on the material, then drag it onto the model in the render window.
4. Release the left mouse button and the material will be applied to the part of the model under the cursor.

To change the finish or add a bump map:

1. Select the **Finishes** or **Bumps** sub-tab from the sub-tab bar on the upper right hand side.



2. Choose a group from the drop-down menu then find the finish or bump map you want to apply from the content panel.
3. Click and hold down the left mouse button on the finish or bump map, then drag it onto part of the model.
4. Release the left mouse button and it will be applied to the part of the model under the cursor.

Bump maps that you have applied to your model will only appear when the SnapShot is rendered, unless you have the highest real-time quality selected in **Edit > Preferences**.

Step 2: Applying a Lighting Scheme to your model

Once you are happy with the materials you've applied, you can add a lighting scheme.
To do this, select the Lighting tab from the main tab bar.



Lighting schemes are split into two sub-tabs based on the type of model you have.

Lighting schemes vary in complexity and accuracy to enable you to choose between render speed and lighting realism.

More accurate and realistic lighting will take longer to render.

To apply a lighting scheme to your scene:

1. With the **Lighting** tab selected from the tab bar, select the **Architectural**, or **Product** sub-tab from the sub-tab bar on the upper right hand side.



2. Choose a lighting group from the drop-down menu then find the lighting scheme you want to apply from the content panel.
3. Click and hold down the left mouse button on the lighting scheme, then drag it onto the render window.
4. Release the left mouse button and the lighting scheme will be applied to the scene. *This can take some time depending on the complexity of the scheme.*

Step 3: Choosing a 2D or 3D background for your model

The next step is to choose either a 2D or 3D background to apply to your scene.

To do this, select the **Backgrounds** tab from the tab bar.



Backgrounds serve to quickly and easily provide context to your model in terms of scale and intended usage. A number of pre-defined background effects are supplied and you can supply your own image if required.

2D backgrounds are fixed in screen space and require you to move your model to fit the background.

3D backgrounds provide a hemispherical image. As you navigate the view, the visible background changes.

To apply a 2D or 3D background:

1. With the Backgrounds tab selected from the tab bar, select the **2D Backgrounds** or **3D Backgrounds** sub-tab from the sub-tab bar on the upper right hand side.



2. Choose a background group from the drop-down menu then find the background you want to apply from the content panel.
3. Click and hold down the left mouse button on the background, then drag it onto the render window.
4. Release the left mouse button and the background will be applied to the scene.
This can take some time when using high quality 3D backgrounds.

Step 4: Creating and Rendering SnapShots of your model

The final step in this workflow is to create and render SnapShots of your model.

To do this, select the **SnapShots** tab from the tab bar.



SnapShots store all data of your scene so it can be brought back at any time. They can be created at any time by pressing the SnapShot button in the toolbar.



SnapShots can be restored to the current scene by dragging and dropping them onto the render window. They replace all previously applied materials, lighting scheme, background and camera settings with those of the SnapShot.

Once you have created all the SnapShots you require, the final stage is to render them out into high quality images.

To create a SnapShot of a scene:

1. Click on the **Create SnapShot** button in the toolbar. The SnapShot will appear in the SnapShots panel.



To apply a SnapShot:

1. Click and hold down the left mouse button on a SnapShot in the SnapShots panel.
2. Drag the SnapShot onto the render window then release the left mouse button and the SnapShot will be applied to the scene.
This can take some time depending on the lighting scheme and shadows within the SnapShot.

To render your SnapShot or sets of SnapShots:

1. If not already selected, select the **Render** tab from the sub-tab bar on the upper right hand side. This will change the content panel to show options for rendering SnapShots.



2. Click on the SnapShot you would like to render from the SnapShot panel below the render window. When the SnapShot is selected, it will gain a purple border around the image.

To render more than one SnapShot, you can hold the Shift key and click more SnapShots to highlight a series, or hold the Ctrl key to add individual SnapShots. Another way to select multiple SnapShots is to hold the left mouse button down in the space around the SnapShots then drag a selection box over the ones you want to render. To select all SnapShots, left click into the SnapShot panel then press the Ctrl and A key together.

3. Change the render options in the content panel to your preferences:
 - Change the file type by choosing one from the **Output Format** drop-down menu.
 - Change the image resolution by choosing a size from **the Longest Side (pixels)** drop-down menu, or by entering your own value. *The shortest side will be calculated based on the aspect ratio of the SnapShot.*
 - Set the render, material and lighting quality by changing the values in the corresponding drop-down menus.
4. Click on the **Render Selected SnapShots** button.
5. The results of the rendering process will be delivered into the SnapShot folder beside your CAD model file. You can access the images quickly by double clicking each SnapShot in the SnapShot panel, or by clicking the **Show Files** button in the toolbar.



Artisan Glossary

A glossary defining common terms used throughout Artisan.

Keyword	Definition
Session	The time spend using Artisan, from opening to closing.
Bump / Bump Map	Makes surfaces appear rough or have a pattern, based on different heights on the surface.
Finishes	Sets only the reflective and transparency of a material. Finishes can be applied onto of your current materials.
Material	A full definition of how an object will look. Materials define the finish, transparency and bump.
SnapShots	Used to store all data needed to replay your scene. SnapShots contain the materials, background, lighting and camera information.
Why use SnapShots?	Used correctly SnapShots become very useful. For example, to render a building in different lighting conditions simply take a number of SnapShots using different lighting schemes and then "Render Selected SnapShots".
Interactive Render	A low quality image created from the render window.
Render	A high quality, photo realistic image of the model.