Version 1.1
User Guide

END USER LICENSE AGREEMENT

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INTRODUCTION

IDX Renditioner and IDX Renditioner Express Free are plug-in applications for Google SketchUp and Google SketchUp Pro versions 6 and 7 that produce photorealistic images of the SketchUp model. IDX Renditioner is powered by the LightWorks rendering engine and combines physically accurate rendering with ease of use. The first time user can get excellent results using the default SketchUp material and lighting properties with no knowledge of rendering concepts. Even more realism can be achieved by adding IDX Renditioner lights, material finishes, modifying the background environment, and adjusting the balance of natural and artificial lighting.

IDX Renditioner and IDX Renditioner Express versions function in exactly the same manner with a few performance and content differences. The differences between the products include:

Maximum Image Size:

- IDX Renditioner creates renderings up to a maximum 16 Megapixels (4096 X 4096 pixels), more than 50 times larger than Express Free renderings. This large size produces greater quality and is particularly necessary for printed presentations.
- IDX Renditioner Express Free creates renderings < 1 Megapixel (640 X 480 pixels).

Performance:

- IDX Renditioner supports multithreading. If the computer CPU has multiple cores IDX Renditioner uses those cores independently during rendering. This produces significant performance increases and faster renderings, particularly necessary with the large image sizes it can produce.
- IDX Renditioner Express Free does not support multithreading.

Differences between the PC and Mac versions include:

- The Mac version rendering window includes zoom functionality to see the entire rendering regardless of image size.
- The PC version allows for installation in both SketchUp versions 6 and 7 during the same installation. The Mac version requires the installer be run once for each version.

INSTALLATION

IDX Renditioner requires Google SketchUp or Google SketchUp Pro version 6, version 7, or both to be installed before installation.

INSTALLING IDX RENDITIONER

INSTALLING ON WINDOWS PC

1. Locate the downloaded file (.zip or .exe format) and if a .zip file extract the files.
2. Locate the application file (.exe).
3. If you have a version of IDX Renditioner, or TurboSketch Studio installed on the target computer, go to the START menu, select Control Panel and Uninstall, or Remove, the previously installed applications.
4. Double click on the EXE file.
5. Once the Installer is running you will see an installation wizard screen.
6. Click Install IDX Renditioner.
7. Follow the steps of the installation, which require you to enter a Serial Number. During this process the installer will look for all eligible versions of SketchUp (6 and/or 7) on the PC and provide an option to install in either one or both versions. If you do not see the SketchUp version in which you want IDX Renditioner to install skip to the troubleshooting comments below.
8. When done, run SketchUp and look for a new toolbar with three red balls and press one to start a render. An activation window should appear.
9. In the product activation window enter the Activation Code that came with your serial number, or, if you do not have an Activation Code follow the instructions on screen to get one online.

Troubleshooting tips for Windows installation:

- IDX Renditioner looks for and uses certain files in the SketchUp installation. They are in the SketchUp Plugins folder and are Examples.rb and Utilities.rb (and their corresponding directories). If it does not see these files it may have a problem during installation. To check for these files, use Windows Explorer, or MyComputer from the START menu, then navigate to: c://ProgramFiles/Google/GoogleSketchUp#/Plugins (with # being the version 6 or 7). If those files are not in the directory, either reinstall SketchUp, or if you have access to another SketchUp installation copy these files to this folder.
- On a 64-bit operating system look for the above files in the program files folder for 32-bit applications. Additional administrator permissions and read/write access may need to be ensured if there are installation problems.

INSTALLING ON MACINTOSH

1. Locate the downloaded file (.mpkg or .dmg format).
2. Double click on the file and follow instructions to extract the installers for Google SketchUp 6 and Google SketchUp 7.
3. Double click on the installation file (.dmg) for the version of SketchUp in which you want IDX Renditioner to be installed.
4. Follow the instructions on screen.
5. When done, run that version of SketchUp. The product installs by default in trial mode. A window for the license manager appears. Run the license manager to enter the serial number to extend a trial (button on the right), or to enter a purchased serial number and activation code (button on the left).
6. A new toolbar should appear in SketchUp with three red balls for the different rendering modes.

QUICK START

RENDERING (QUICK START)

For a short introductory video to IDX Renditioner visit www.IDX-Renditioner.com and select the option for Renditioner Videos. In a few minutes you will learn how to apply material textures, add a background image, and add artificial lights.

After installing IDX Renditioner Express Free you will see a new toolbar within SketchUp.

NOTE: It is considered best practice to always save your model and any changes before you render.

To produce a photorealistic render of the current SketchUp model, click one of the 3 red render buttons. The default behavior for each is as follows:

Preview Render — a fast render with simple lighting.

Standard Render — a higher quality render with more accurate lighting, and anti-aliasing turned on to reduce jagged edges.

Presentation Render — final quality render with higher quality lighting accuracy.

If the image quality isn't what you expected then you can configure the render settings by clicking the **IDX Renditioner Render Settings** button on the IDX Renditioner toolbar. Scene Size and Lighting Characteristics can have an immediate impact on the quality (but can have the greatest impact on render time. If the next render takes longer, keep reading this guide.

NOTE: The larger you make the final image the greater the quality and time difference will be between levels of rendering. IDX Renditioner Express Free, with much smaller image size than IDX Renditioner, will not produce as high a quality of image. This results from the fact that with small images there is a reduced set of pixels to which light bounces can be mapped.

LIGHTING (QUICK START)

 IDX Renditioner uses the location of the sun in your SketchUp model for natural lighting. You can add light fixtures to the model from the IDX Renditioner Lights folder in the SketchUp Components Window. These components have pre-set light attributes. Right click on a light component and select **IDX Renditioner Light Attributes** to change its settings.

Click the Lighting button on the IDX Renditioner toolbar to switch Natural Lighting (from the sun) or Artificial Lighting (Component Lights) on and off, or change other settings like the type of sunlight. The Natural Lighting slider acts like a balance when both natural and artificial lights are in a scene. With only Natural Lighting, increasing brightness (sliding to the left) of natural light will increase the contrast and the shadows will be darker.

NOTE: The IDX Renditioner user forums may have additional light fixtures for downloading and use. You may also share fixtures you create with others. The forums are located at http://forums.idx-design.com.

MATERIALS (QUICK START)

IDX Renditioner uses SketchUp materials and any changes made using the SketchUp Material Editor. Renditioner also automatically creates a bump map for a texture based on the light and dark areas of the bitmap. You can add realistic finishes, such as Mirror or Polished, by selecting any face, group, or component with the material you want to modify, opening the SketchUp context menu (right clicking), and selecting **IDX Renditioner Material,** then select the material you wish to edit (from the front and back side of the face). Any change to a material is made to ALL instances of the selected material, not just the face upon which you clicked.

IDX Renditioner supports materials applied to groups and components, including dynamic components (SU7). But if a material is applied at the group or component level, then you must right click at the group level to get the IDX Renditioner Material attributes for that material, rather than selecting the face itself.

ENVIRONMENT (QUICK START)

 IDX Renditioner automatically configures the background to suit the lighting setup, but you can override the default environment by clicking the **IDX Renditioner Environment** button on the IDX Renditioner toolbar and changing the settings.

IDX RENDITIONER OVERVIEW

Photorealistic rendering is primarily concerned with how light interacts with the model. IDX Renditioner uses a combination of natural and artificial light sources and material attributes to add photorealistic effects.

For realistic images it is necessary to include ambient lighting from the sky, direct sunlight, light from light fixture components, and light bounced off the surfaces of the model.

IDX Renditioner approximates realistic daylight based on the location of the sun in SketchUp plus a choice of lighting conditions. By default the color of the background is automatically adjusted to suit the light settings.

For night scenes you need to add only IDX Renditioner lights from the IDX Renditioner folder of the SketchUp component library and the software will automatically calculate the lighting within the scene.

IDX Renditioner can create very realistic images using the standard color and texture material descriptions in SketchUp, but for added realism you can add surface finishes such as polished, metallic, plastic, or mirror; fine tune the reflectance using a slider that is graded for each finish; and you can adjust the “Bumpiness” of finishes to make it anywhere from smooth to rough.

IDX RENDITIONER TOOLBAR

After installing IDX Renditioner you will see an additional toolbar:

IDX RENDITIONER PREVIEW RENDER

 This opens the render window and performs a fast render, typically used to check material and light settings before performing a higher quality render. By default the Preview Render mode uses the fast lighting and low image quality to give you an initial idea of the light levels and material finishes, but you can configure this mode using the Render Settings window.

Anti-aliasing is performed on materials, but not geometry. This means that the edge of a wall might be rough and jagged, but the line in a brick material’s texture will appear straight. Render times will depend on the model size and lighting setup, but for Preview Mode you would expect to measure times in seconds.

IDX RENDITIONER STANDARD RENDER

 This opens the render window if not already visible, and performs a relatively quick render. Used for reasonable quality renders with accurate lighting to review how the design or model is progressing. Anti-aliasing is performed on materials and geometry for smoother edges. Again the quality and accuracy can be controlled via the Render Settings window. Render times typically measured in minutes.

IDX RENDITIONER PRESENTATION RENDER

 This opens the render window if not already visible, and performs an on-screen render. This mode is typically used for final presentation quality renders with render times sometimes measured in hours, although with IDX Renditioner Express Free the smaller image size makes this unlikely. Again the quality and accuracy can be controlled via the Render Settings window.

SAVE RENDERING

 This button is used to save a copy of the render. You have a choice of the following file formats on the PC version: JPG (jpeg), TIFF, TGA, or BMP. The Mac version includes JPG(jpeg), TIFF, BMP, and PNG.

IDX RENDITIONER LIGHTING

 This opens the IDX Renditioner Lighting window, from which you can choose between natural and artificial lighting, specify lighting conditions, and more.

IDX RENDITIONER ENVIRONMENT

 This opens the IDX Renditioner Environment window, used for configuring rendering environment specifically the background.

IDX RENDITIONER IMAGE CONTROLS

 This opens the Image Controls window, used to set the size of the image.

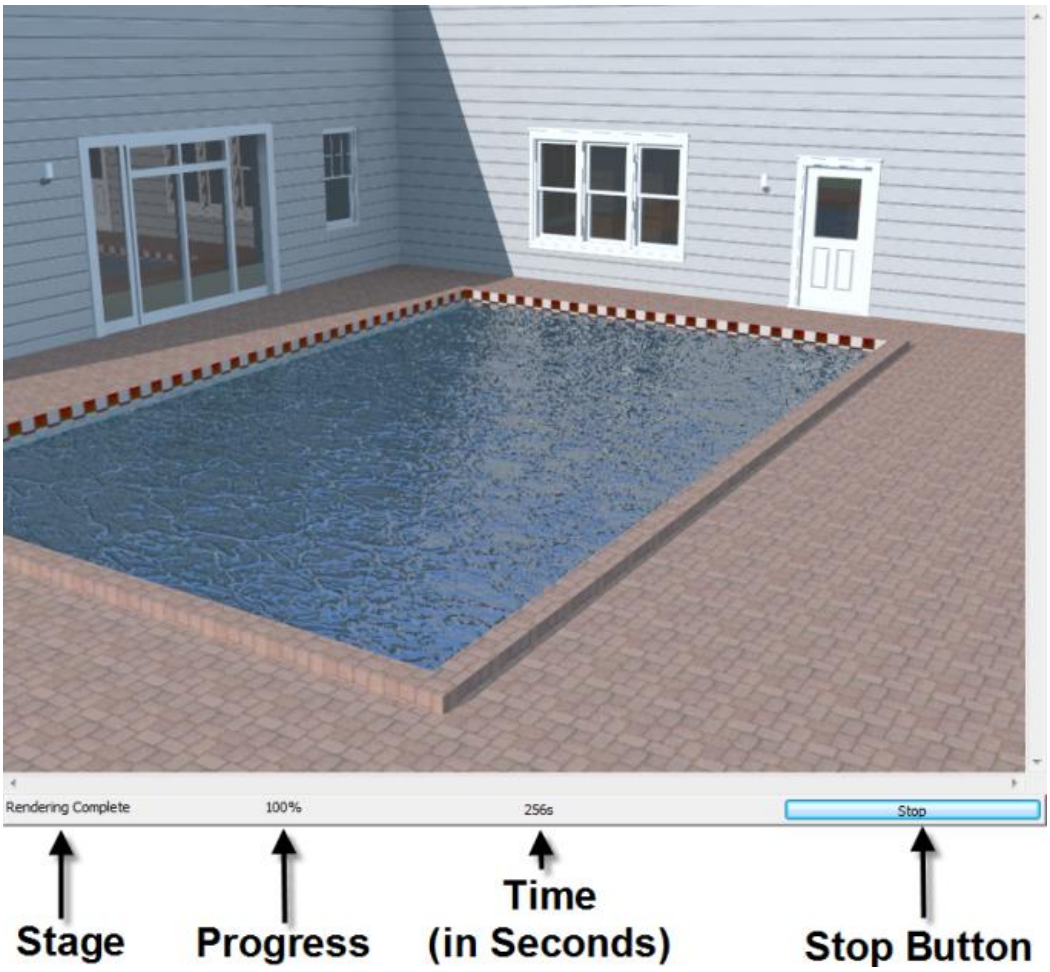
IDX RENDITIONER RENDER SETTINGS

 This opens the Render Settings window, used to control the quality and accuracy of the various render modes.

IDX RENDITIONER USER GUIDE

 This opens this IDX Renditioner User Guide as a PDF to assist you in using the program.

RENDER WINDOW



Above is an example of the PC version of the IDX Renditioner render window that appears the first time you click one of the render buttons. You can resize the window by dragging the corners, or via the Image Controls window. The render window will always open to ½ the height, and ½ the width of the SketchUp window (unless using the Free version of IDX Renditioner Express and if one of those dimensions would exceed the maximum size of 640 x 480 for that version of the product).

The IDX Renditioner window for the Macintosh includes additional buttons along the top that allow you to zoom in/out or fit the rendered image into the view window. The last option is useful when the Image Controls have been used to set an image size larger than the screen. These buttons are for viewing only and have no impact on an output file.

RENDERING PHASES

The status bar includes a progress bar and displays the percent progress, the current phase, and the elapsed time of the current render. Phases include:

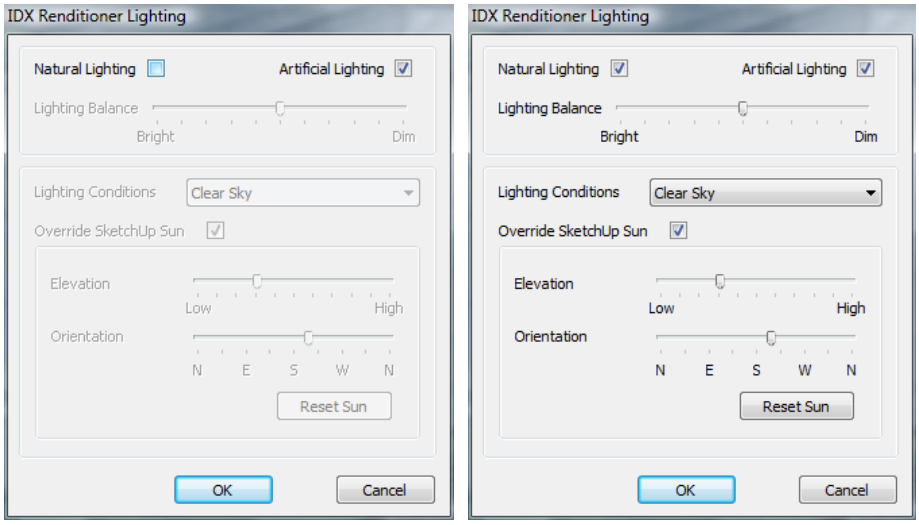
- **Loading Model**
- **Bouncing Light** (accurate lighting of interiors/dark scenes only) make use of light bouncing off of surrounding surfaces.
- **Gathering Light** (accurate lighting only)
- **Adjusting Image Levels**
- **Rendering**
- **Rendering Complete**

RENDER DATA

The Progress percentage is relative to the steps involved in rendering, not to the total rendering time. The time for rendering varies depending on several factors including: the complexity of the geometry, the size of the model, lighting controls, and other factors not the least of which is the CPU power of the PC and whether other applications are running and competing for computer resources. Therefore total rendering time can not be accurately predicted ahead of time.

LIGHTING

IDX Renditioner includes both natural lighting from the sun and sky, and artificial lighting from light fixtures introduced into the model as special components. The IDX Renditioner Lighting window allows the user to select either natural lighting or artificial lighting or both together.



NATURAL LIGHTING

With natural lighting IDX Renditioner automatically uses the location of the sun in your SketchUp model to determine exterior lighting. If the **Natural Lighting** check-box is marked in the lighting dialog natural lighting will be used during rendering.

NATURAL LIGHTING BRIGHTNESS

The **Natural Lighting** slider controls the brightness of the natural (sun/moon) light.

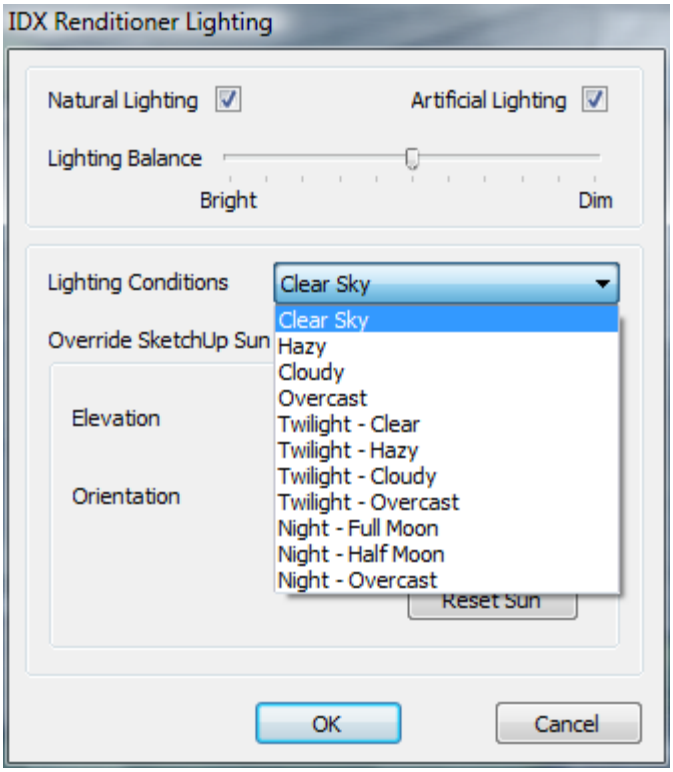
If the **Natural Lighting** slider is set all the way to **Dim** the natural light will be very weak, and artificial (component) lights will appear relatively bright.

If the **Natural Lighting** slider is set to **Bright** the natural light will be very intense, and artificial (component) lights will appear relatively to be weak or off.

If only Natural Lights are on, or there are no artificial lights in the model, the slider will not have a significant effect because of image tone mapping. Tone mapping adjusts the image exposure, much like a fully automatic camera. That said, the brighter the setting, the stronger the light before tone mapping adjustments, and therefore the darker the shadows become and the stronger the contrast. This last point can produce almost the opposite of the intended effect in some circumstances.

LIGHTING CONDITIONS

By default IDX Renditioner assumes a clear sky with no clouds. You can choose from a list of **Lighting Conditions** to alter this effect.



These options modify the color and brightness of both direct sunlight and reflected light from the sky. They can also be used to control the background color (see Environment Setting) which is used for that reflected "sky" light. Different settings also impact how hard or soft are the shadows and can modify the tone of colors when rendered.

Using Hazy can produce more glare and reflection brightening some aspects of a scene. Cloudy produces softer shadows than Clear Sky and Hazy. Twilight settings use a warmer color for the sun, similar to a photographer's "good light," but the intensity is also lower, and the slider may need to be moved to the left. Night renders have soft moonlighting, except when there are artificial lights, which tend to wash out the subtle details. For darker renders, large image sizes are recommended.

NOTE: IDX Renditioner uses the location of the SketchUp sun as the position of the moon. Using the Override SketchUp Sun settings you can also precisely locate the moonlight.

OVERRIDE SKETCHUP SUN POSITION

You can choose to override the SketchUp Sun Position. You can then specify the **Azimuth** (the orientation of the sun clockwise from the SketchUp green axis (North [**N**], South [**S**], East [**E**], West [**W**]), and the **Altitude** (the angle between the sun and the ground) **High** or **Low**. This allows you to more easily position the sun.

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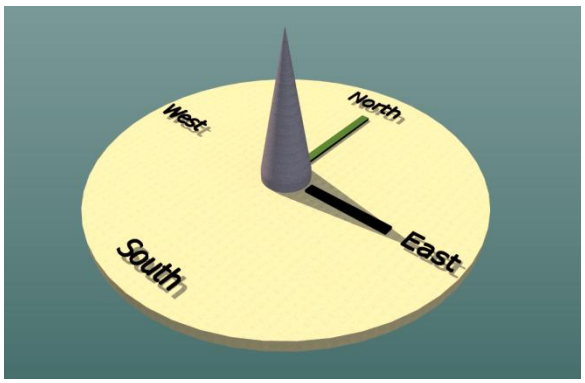
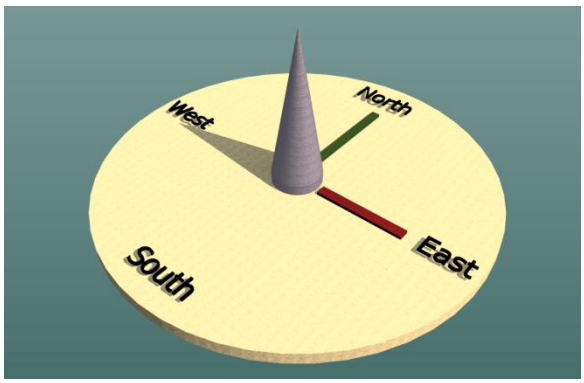
<tr><td> 
</td><td> 
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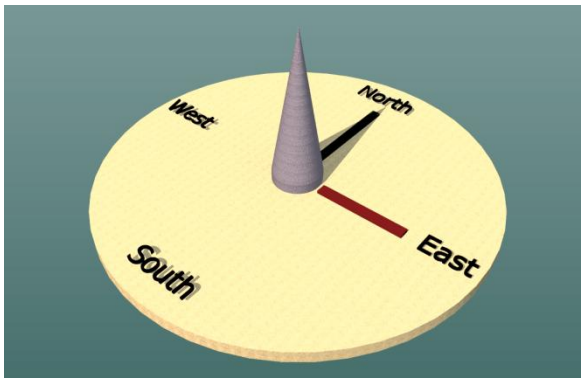
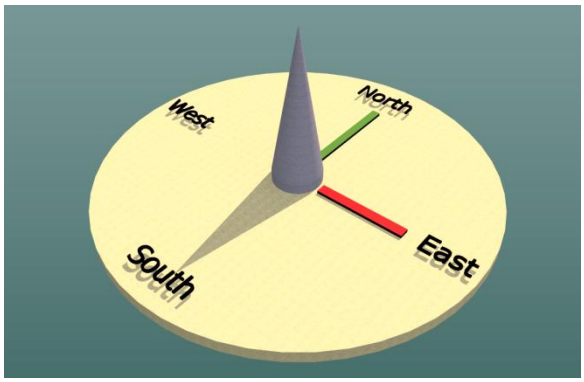
<tr><td> 
</td><td> 
</td></tr>
<tr><td>Sun in the South</td><td>Sun in the North</td></tr>
</table>

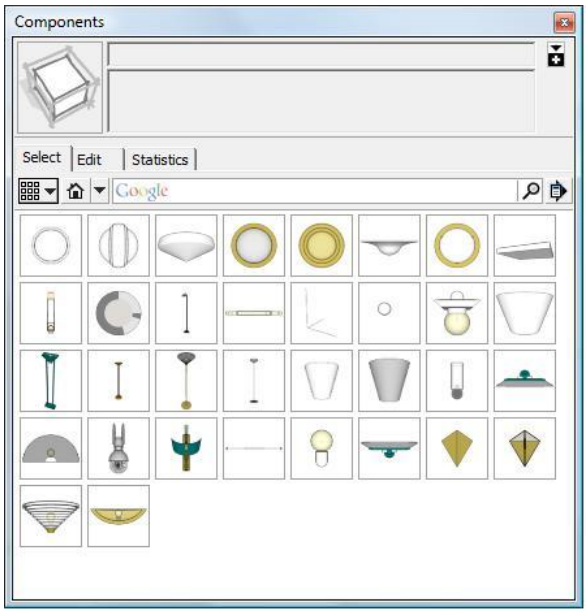
Sun Override Positions

SUN RESET

If you have changed the position of the sun using Sun Override option, you can use the **Sun Reset** button to set the elevation and orientation, allowing for incremental changes from the existing position. This functionality does not change your sun settings in the model.

ARTIFICIAL LIGHTING

IDX Renditioner includes a library of light fixtures available via the SketchUp Components window (IDX Renditioner Lights). These lights can be turned off for daylight images and turned on again for night-time. Refer to SketchUp's documentation to learn more about components. Additional light components may be available at the user forums: http://forums.idx-design.com.



LIGHT LEVELS

IDX Renditioner uses physically based lighting and automatically adjust the light levels in a similar way to the human eye.

When natural and artificial lighting are used at the same time, the much brighter daylight will tend to hide the contribution of the **Artificial Lighting**. Dimming the natural lighting can create balanced effects that can make compelling scene.

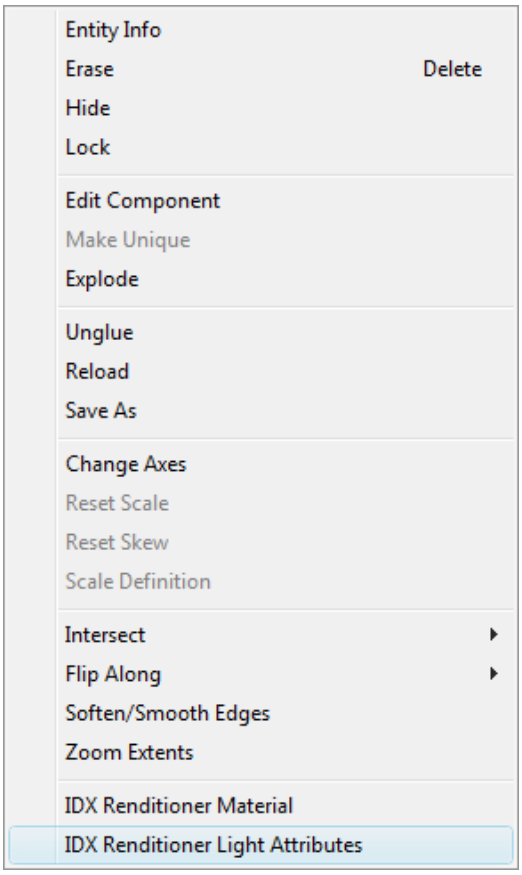
IDX RENDITIONER LIGHTS

USING IDX RENDITIONER LIGHTS

IDX Renditioner provides a library of light fixtures that are available via the standard **SketchUp Components** window. Select the light fixture that suits your requirements and place it in the model using standard SketchUp commands. The light fixture will glue to walls, floors, or ceilings as appropriate.

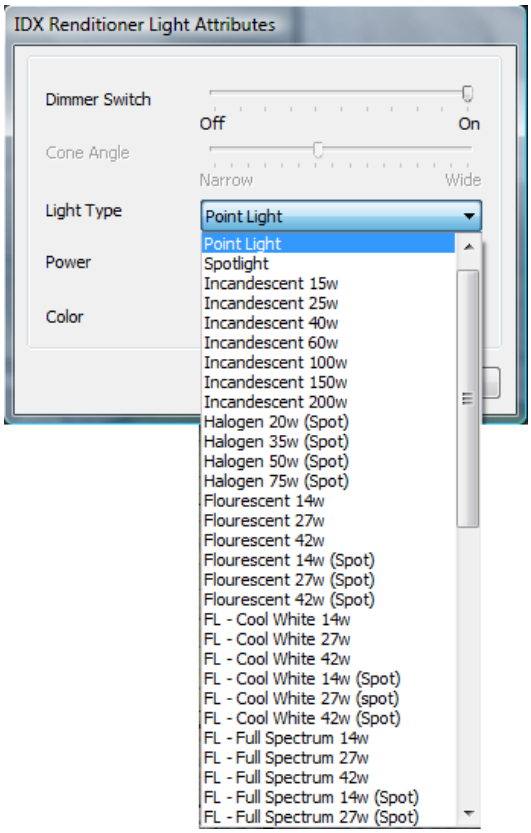
You can mix Natural and Artificial Lighting but bright sunlight will tend to wash out the effects of the much lower powered Component Lights unless you balance natural and artificial lighting.

You can set the Light Attributes by selecting the component and using the SketchUp context menu (**right click** on the component or the component name in Outliner).



Then select the **IDX Renditioner Light Attributes** option.

The following window is displayed (settings vary for different lights):



If the Component contains more than one IDX Renditioner Light then only the Dimmer Switch option is enabled. You may edit those lights only by accessing the subcomponent and opening this dialog for each *unique* light. If the Component contains no IDX Renditioner Lights then the Light Type is "**None**" and the controls are disabled.

Double-clicking on the **Color** box will open the **Color** dialog. This will allow you to select a color for the light emitted by the fixture, and it determines the "glow" of the actual light component, for example a bulb within a fixture.

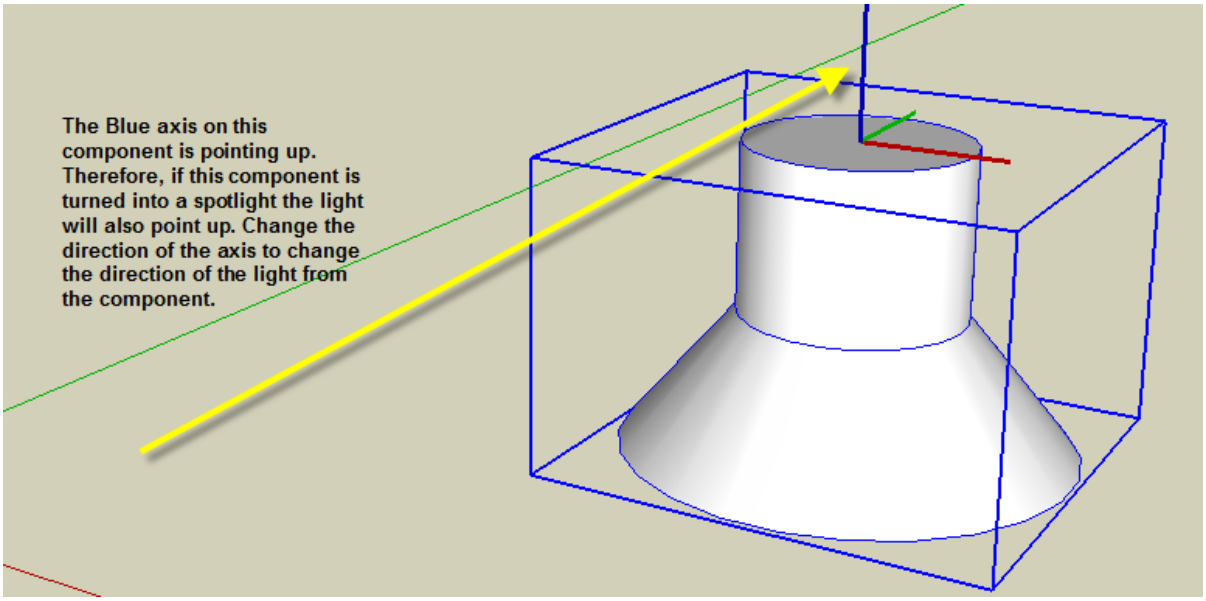
CREATING LIGHT COMPONENTS

You can add **IDX Renditioner Light Attributes** to any SketchUp Component, including dynamic components, by selecting it and choosing the **IDX Renditioner Light Attributes** option from the SketchUp context menu (right click).

First choose a **Light Type** from the drop down list, this controls how light is emitted.

Point lights emit light in all directions and **Spot lights** define a cone of light in the direction of the component's **Blue Axis**. Both Point and Spot lights emanate from the origin of the component. The origin is the point where the green, red, and blue axes meet.

NOTE: By default a component's Blue axis points upward. If you use the default orientation when creating a spotlight it will point upward.



NOTE: refer to the SketchUp help documentation to guide you in creating components and aligning axes.

The **Light Type** also sets the initial values for the **Power** and **Color** of the light, but you can change these to suit the specific light component as required.

The **Dimmer Switch** combines with **Power** to define the actual intensity of the light, and can be used to temporarily switch the light off.

To remove the IDX Renditioner Light attributes from a component set the light type to "**None"**.

Note that the **Power** parameter represents the total output from the light measured in lumens. A **Spot light** of the same **Power** as a **Point light** will tend to look brighter because all the light is focused in one direction.

The geometry in **Component Lights** is automatically set as non-shadow casting and the material colored to suit the Power and Color of the light so that they appear to glow. When **Artificial Lights** are off then the material will no longer glow.

To make a complete light fixture you would typically create one or more components for the actual lamps (light emitting objects), and then position these within the light fixture component itself.

NOTE: When you turn a component into a light the entire component becomes the light source. If you want you could turn a sofa into a light although the light will only emit from one point, the axis. The best method is to add a sub-component to a light fixture to act as a light bulb; AND THEN make that sub-component the light source. If the subcomponent is the light source, context clicking on the parent component, the fixture, still engages the light attributes dialog for the subcomponent.

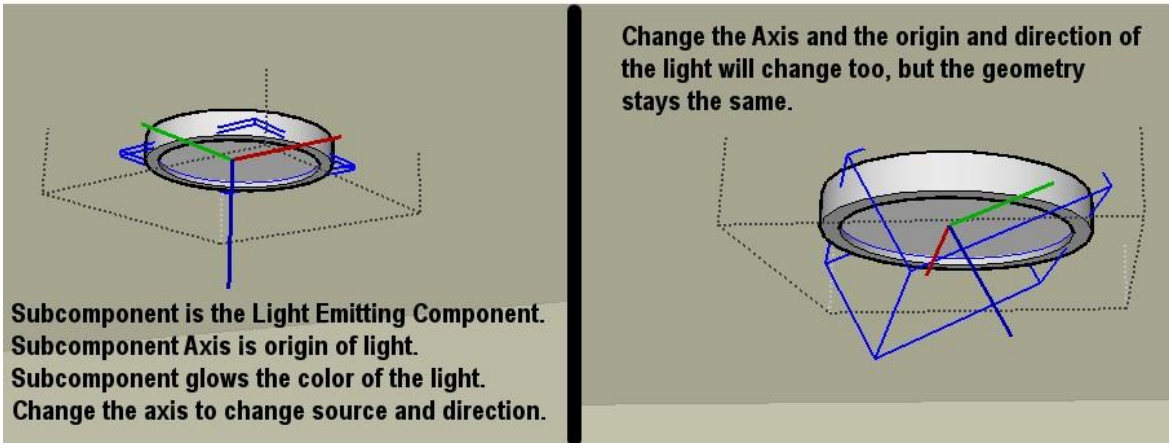
Additionally, if you save the component (from the component window's In Model menu) the light attributes will not be saved unless the light attributes are in a sub-component.

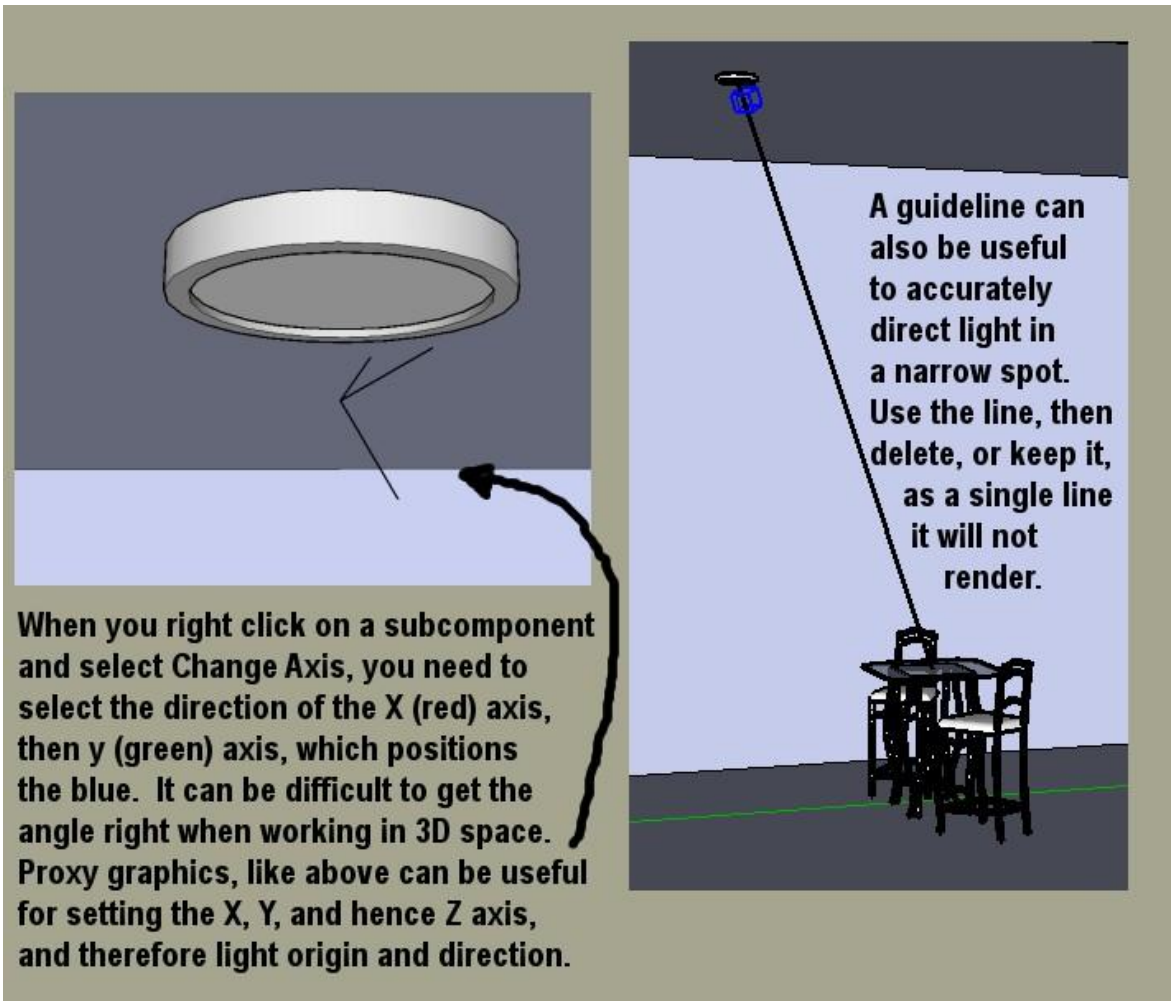
If you have a dozen lights that are all the same but want one to emit its light at a different angle, you must make the component unique. That is true also of the subcomponent. Simply select the component, right click and select Make Unique. Then double click on the component to go into edit mode, select the subcomponent and make it unique. Otherwise every light will have the change you are about to make.

The axis of the component does not affect the location of the geometry, only the direction and origin of the light. You can set it up outside of the light fixture if you want, or on or near the surface of the light subcomponent.

On a related note, some components like strip wall lights have subcomponents that are fixtures, and they have subcomponents that are light emitters. In those cases the light fixture can be moved, and the subcomponent will move with it.

Changing axis can be difficult in SketchUp. See the images below for one example of how to do it...



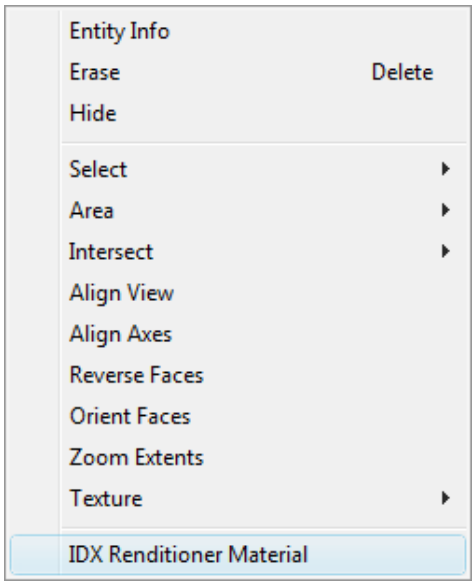


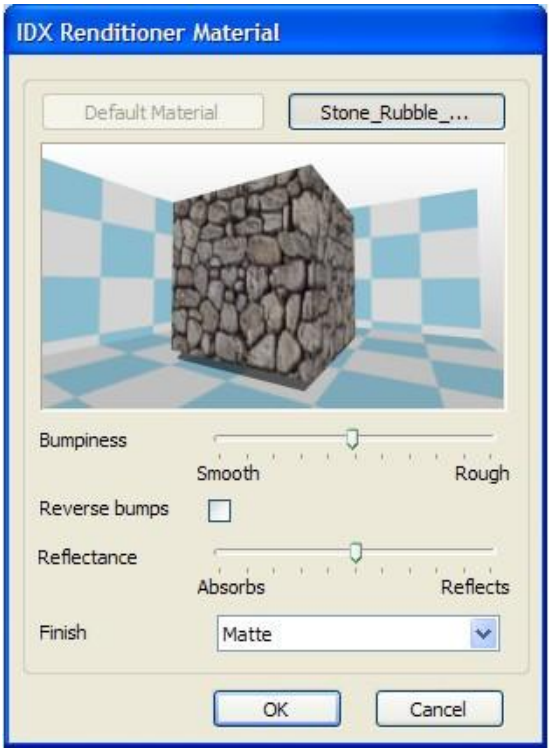
IDX RENDITIONER MATERIAL

You are able to extend the standard SketchUp material attributes to enable more sophisticated surface finishes.

Select a face with the material you would like to modify, and then open the SketchUp context menu (right click). Any changes you make will change all instances of the material, not just the selected face. To edit only one instance of a material, make a copy of the material and assign it to the desired face, then add the material attributes to that instance.

Then choose the **IDX Renditioner Material** and you will see the following window.





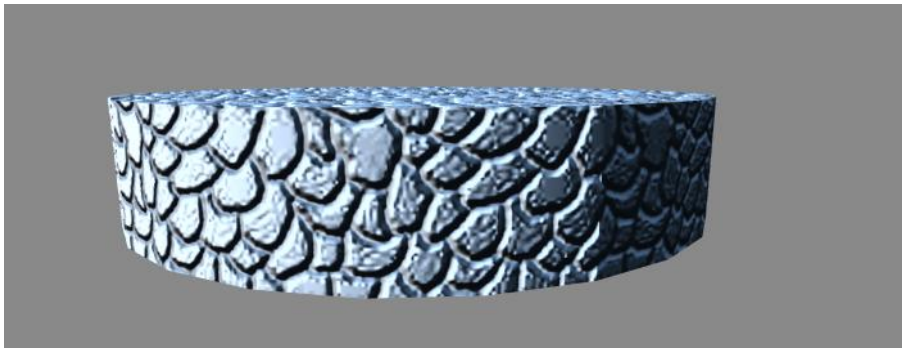
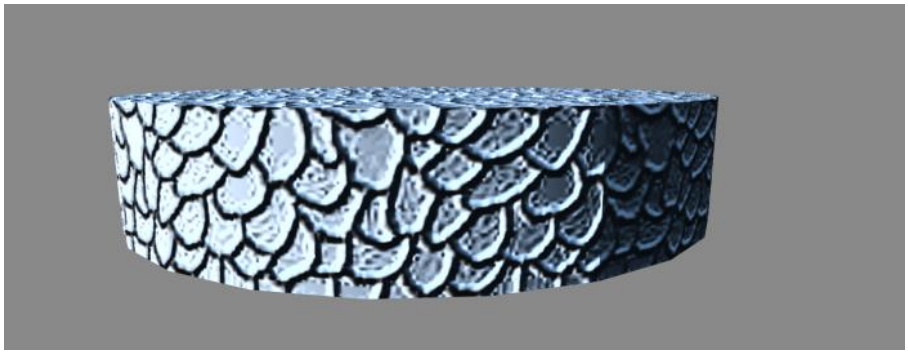
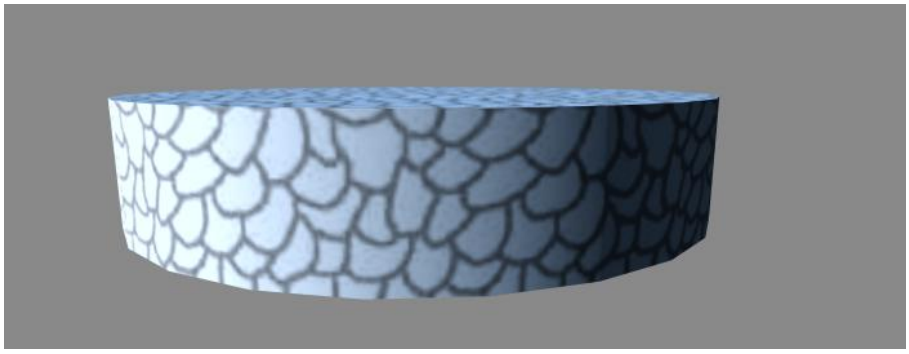
The name, color, texture, and opacity arguments are defined in the SketchUp Material Editor window. IDX Renditioner allows you to define additional attributes, **Bumpiness, Finish,** and **Reflectance**. The reflectance slider allows you to refine the level of reflectance in the context of the Finish that is applied. Therefore you may have a Polish finish and refine the level of Polish accordingly. Therefore the slider is not equivalent from finish to finish, but is always in context with the selected finish.

BUMPINESS

This parameter controls the bumpiness of the surface from `smooth' to `rough'. IDX Renditioner generates a bump map from the texture applied. The material finish chosen can also add an element of bumpiness as well. For solid colors the only bump comes from

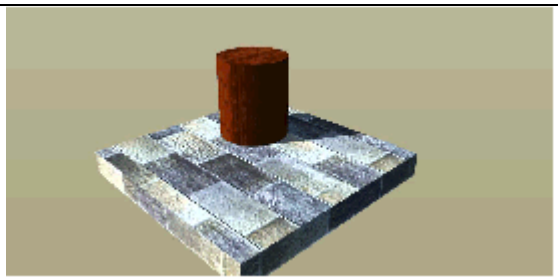
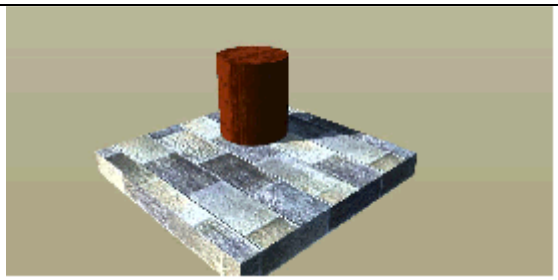
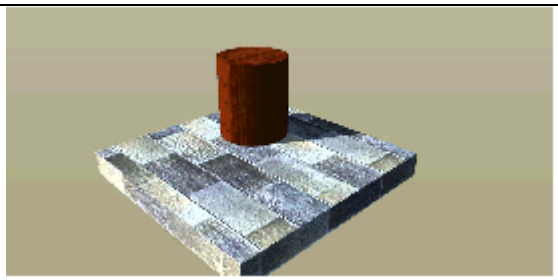
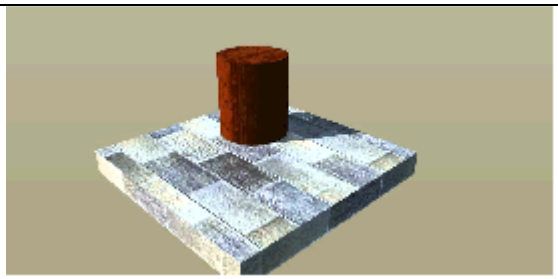
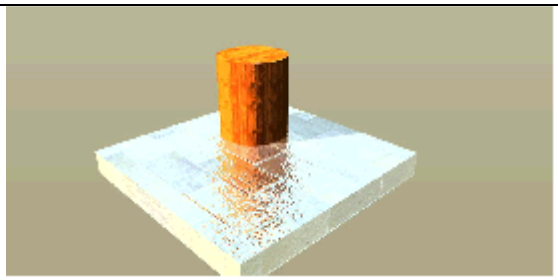
the finish, although by default the bumpiness is set to smooth. For textures the bump pattern is generated by treating dark parts of the image as indentations, and light parts as embossed.

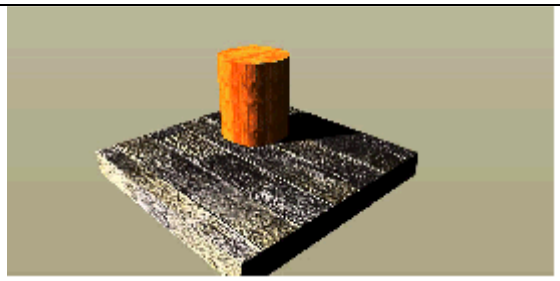
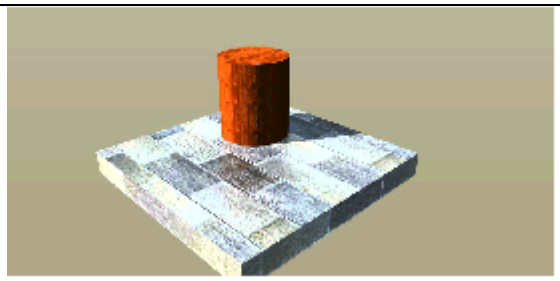
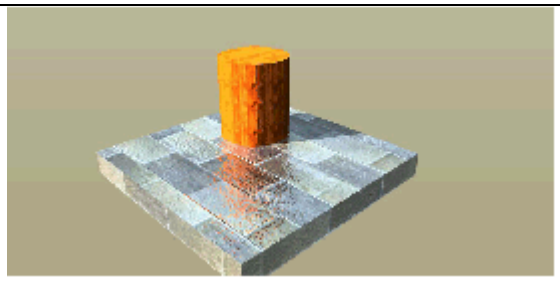
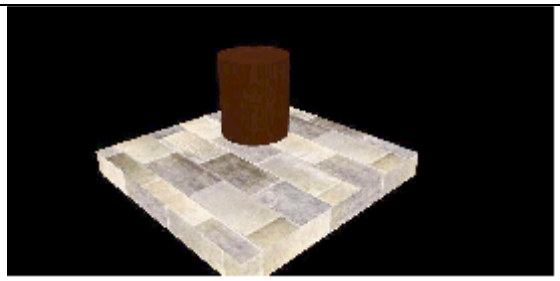
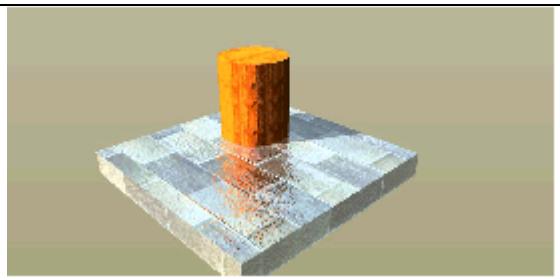
Checking the **Reverse Bumps** option makes indentations (dark) appear as embossed and embossed areas (light) appear as indentations.

Normal Rough	
Reverse Rough	
Smooth	

FINISH

IDX Renditioner includes a set of pre-defined surface finishes that define how light interacts with the material. The set of finishes available are the following:

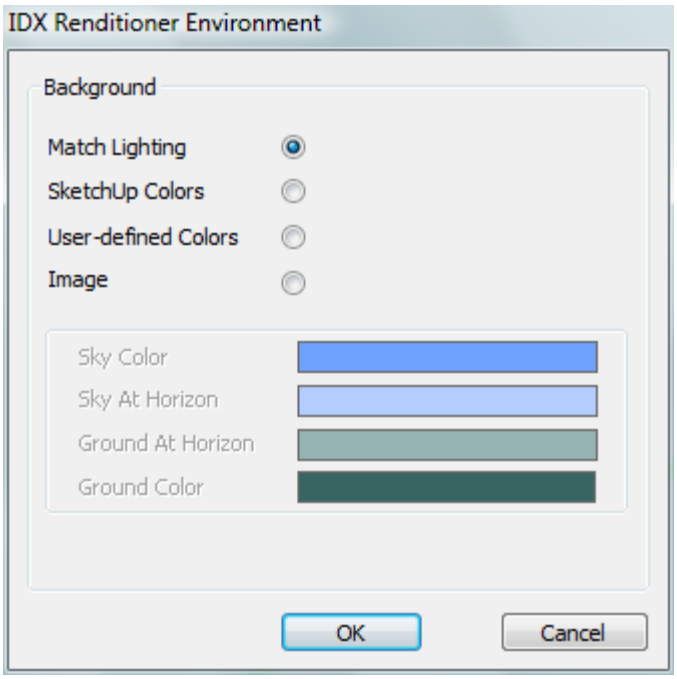
Matte	
Plastic	
Varnished	
Polished	
Mirror	

Metal (dull)	
Metal (Polished)	
Glass	
Glow	
Water	

These control the shininess and the reflectivity and also combine with the Bumpiness control to define how rough the surface appears. Water for example is reflective and has large scale roughness pattern.

ENVIRONMENT

Clicking the **IDX Renditioner Environment** button on the toolbar displays the following window from which you can define the background to the rendered image.



BACKGROUND

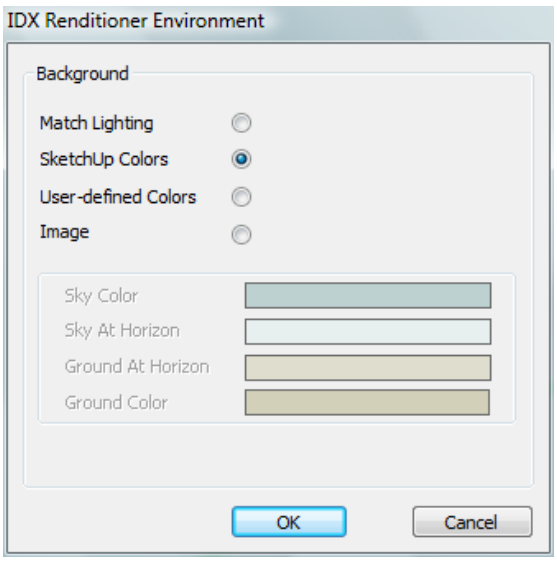
There are several background modes available in IDX Renditioner.

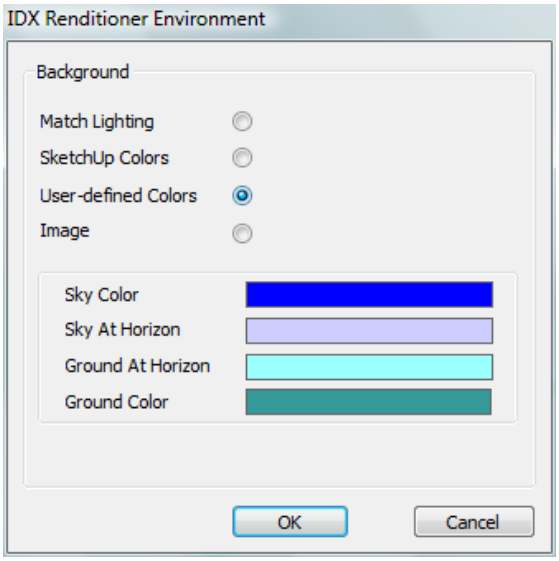
The default mode **Match Lighting** automatically adjusts the sky and ground colors to suit the lighting setup. When **Natural Lighting** is switched off, a night-time background is selected; otherwise the background matches the **Lighting Conditions** setting.

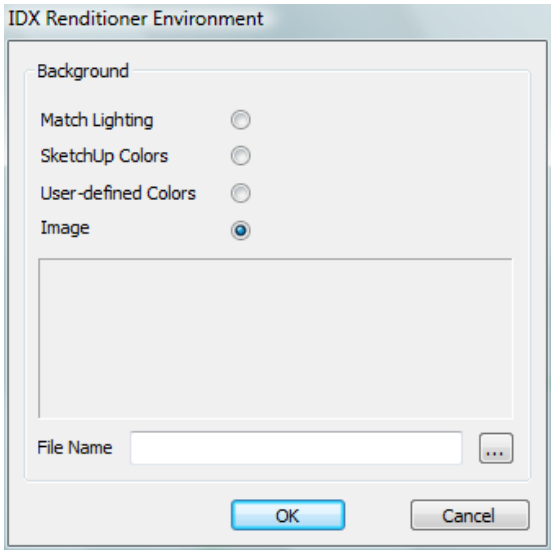
The **SketchUp Colors** option uses the ground and sky colors defined in the edit background tab of the SketchUp Style window.

The **User Defined Colors** option allows you to specify colors for the sky, the horizon, and the ground. Click on any color to open a color-selector dialog.

The **Image option** uses a bitmap image as the background. The **Open File** button opens a **File Open** dialog with a choice of bitmap file formats. That background image will be automatically scaled to fit the proportions of the render window.


IDX Renditioner Environment
Background
Match Lighting
SketchUp Colors
User-defined Colors
Image
Sky Color
Sky At Horizon
Ground At Horizon
Ground Color
OK
Cancel


IDX Renditioner Environment
Background
Match Lighting
SketchUp Colors
User-defined Colors
Image
Sky Color
Sky At Horizon
Ground At Horizon
Ground Color
OK
Cancel


IDX Renditioner Environment
Background
Match Lighting
SketchUp Colors
User-defined Colors
Image
File Name
...
OK
Cancel

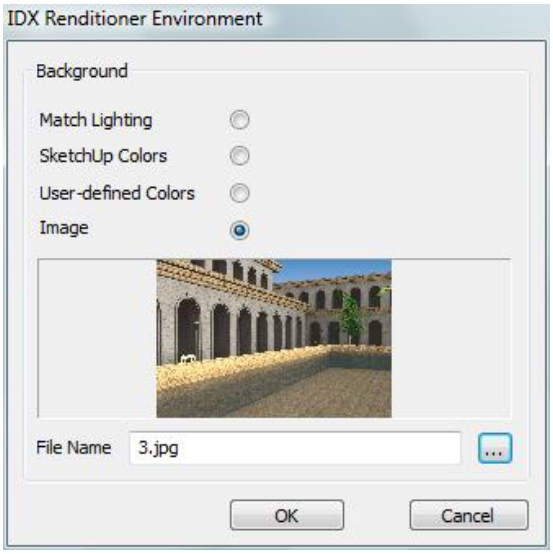
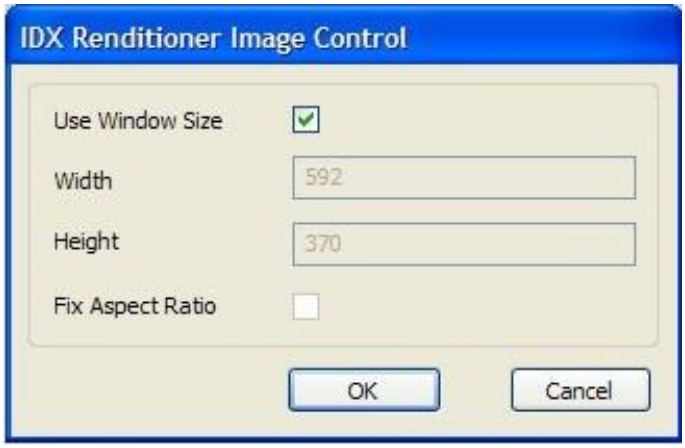

IDX Renditioner Environment
Background
Match Lighting
SketchUp Colors
User-defined Colors
Image
File Name
3.jpg
...
OK
Cancel

IMAGE CONTROLS

Clicking the **Image Controls** button on the IDX Renditioner toolbar displays the following window:



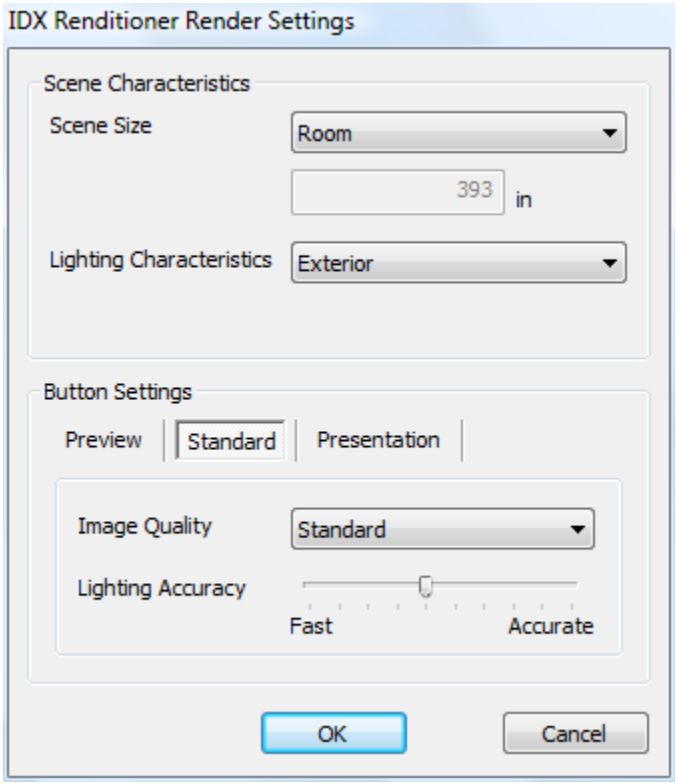
RENDER SIZE

Render size defines the Width and the Height of the rendered image in pixels. If you are happy with the ratio of height to width but want to adjust the size then you can set the **Fix Aspect Ratio** option. By default the window will open in proportion to the current SketchUp window dimensions at half the width and half the height unless one or both exceeds the maximum image size of 640 x 480 for IDX Renditioner Express Free.

If the **Use Window Size** is selected, the other options are disabled. To change the render size, drag the render window to the dimensions or size you want. Deselect **Use Window Size** to enter precise values for the render. The render window will not change size, but scroll will be added if the image is larger than the window.

RENDER SETTINGS

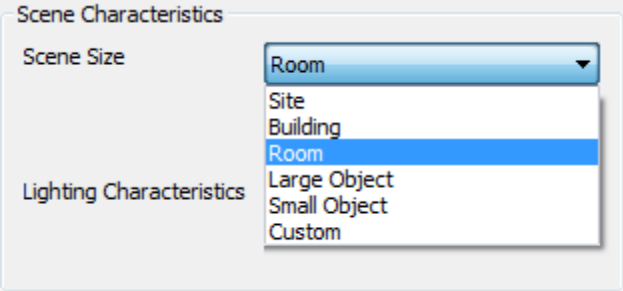
Clicking the **Render Settings** button on the IDX Renditioner toolbar displays the following window that allows you to modify the default render settings to the particular scene and to optimize the **Image Quality**, **Lighting Accuracy**, and performance.



Scene Characteristics can be optimized by considering certain characteristics of the model. The characteristics may depend on the particular view of the model and the lighting setup. These characteristics are particularly significant in combination with the **Lighting Accuracy** setting. Using the most detailed Scene Size and Lighting Characteristics will have the greatest impact on render times.

SCENE SIZE

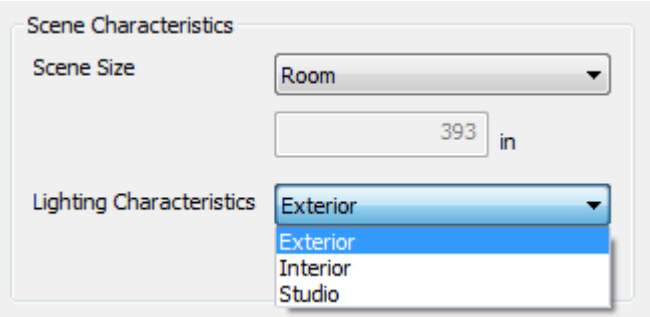
Use **Scene Size** to specify the approximate size of the area of interest in the current view of the model. You can choose from a list of typical scene types (site, building, room, furniture, large object, or small object) or, if the model is not to scale, select custom and enter the size yourself, in inches. Note that if your camera is focusing in on the details of a chair within a room you might prefer to choose large object rather than room. Setting a larger **Scene Size** reduces the number of bounces off of each surface in the model, increasing the speed of rendering. For larger scene sizes you may find that using Site or Building will improve the render quality, so choose the size appropriate to your scene.



LIGHTING CHARACTERISTICS

The **Lighting Characteristics** option is used to help IDX Renditioner decide the precision and accuracy of the rendering process when calculating the lighting within the scene. For example, the **Interior** can be used to turn on the **Bouncing Light** phase during rendering.

- **Exterior** — The default and fastest option - doesn't do **the Bouncing Light** phase. (see rendering phases)
- **Interior** — Use for models that have dark areas that are not lit directly by light sources - it switches on additional **Bouncing Light** functionality beyond that done in Standard and Presentation renders, but may noticeably increase render times.
- **Studio** — Typically used for a single objects in the middle of the scene where you want to pick out more detail - it uses a higher number of light bounces and a higher resolution for surfaces, and uses the **Bouncing Light** phase. Using the studio setting can result in long to very long render times.



RENDER MODES

You can control the settings of the three render buttons on the toolbar.

- **Preview Render**
- **Standard Render**
- **Presentation Render**

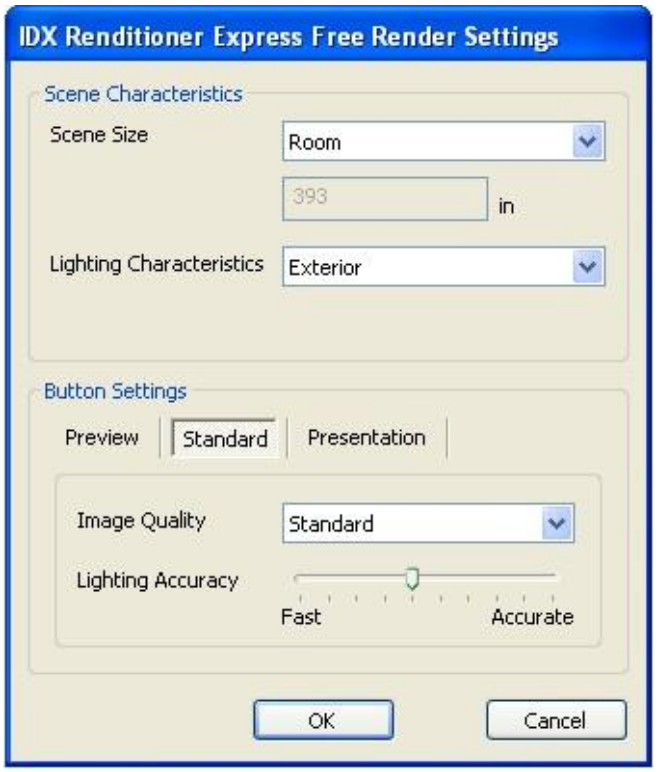
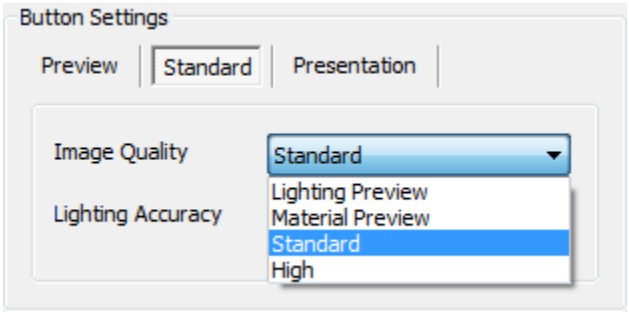


IMAGE QUALITY

Controls the quality of the image, in particular the level of anti-aliasing used to smooth jagged edges.

- **Lighting Preview** — no anti-aliasing or reflections
- **Material Preview** — anti-aliasing of materials only, not geometry.
- **Standard** — anti-aliasing of materials and geometry sufficient for most scenes
- **High** — use for models with highly detailed geometry



Every increase in the level of image quality will result in progressively greater rendering time, although with IDX Renditioner Express Free image sizes, even Standard renders should be quick in most cases.

LIGHTING ACCURACY

The Lighting Accuracy sliders are used to control the accuracy of the light calculations in particular the accuracy of the more subtle `secondary shadows' created by light bouncing between the surfaces of the model.

Lighting Accuracy (none - slider at far left) -- IDX Renditioner calculates direct light from the sun and light components and uses simple ambient lights to illuminate parts of the model that are not lit directly.

Lighting Accuracy (low to high) -- IDX Renditioner calculates light reflected from the sky as well as direct light from the sun, and also light bouncing between the surfaces of the model.

Increasing Lighting Accuracy will result in increased render times and usually better quality images. Scenes that have a very small amount of direct lighting, such as dark interiors, will require high lighting accuracy settings to get good quality images.

SAVE RENDERING

The Save Render button on the IDX Renditioner toolbar is used to save a copy of the current render to a bitmap file. When the button is clicked either the Windows Save dialog opens, or a Mac Finder window allowing you to name the file and designate the location. The PC version supports JPEG, TIFF, BMP, and TGA. The Mac version supports JPEG, TIFF, and PNG.

Happy Rendering ☺… Share you images, ideas, and knowledge, or get help from others at http://forums.idx-design.com