

SW Tips/Tricks

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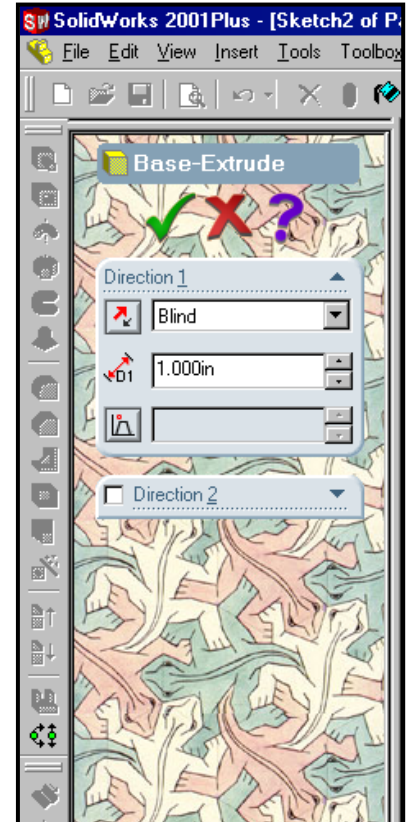
September / October 2002

The FeatureManager and PropertyManager

Hidden in the System Options is the ability to change the FeatureManager's background color. This is the color that will be seen under the design tree and the list of configurations. To change the color to a blue, gray, olive, etc, click Tools, Options. On the Systems Options tab, click Colors. From here, simply select the desired color from the FeatureManager Color drop-down list.

The best customizable feature that SolidWorks has is the PropertyManager Skin. This is the best way for a user to show their personality and make SolidWorks feel like their Windows desktop. A skin is a tiled bitmap image that is applied as a background under the dialogue boxes of the PropertyManager. For the most part, the skin will only be seen when editing the definition of a feature or while in the sketcher. The default SolidWorks skins are high quality and very work appropriate but they lack the ability to really showoff the personality of the user. Good ideas for a custom skin are: an Alma mater's

logo, picture of family members, picture of a dream car, picture of a tropical getaway, an Escher tessellation, or a company logo. Although it is not necessary, it is ideal to use an image that will tile well so that it makes a seamless background. Pretty much whatever you would apply as a Windows desktop background would work as a skin. A final item to consider when choosing a skin is that it's not a good idea to use a skin that is distracting to the user. The point here is to keep productivity up in a personalized environment.



Creating a skin is an easy task that requires creativity and a photo editing software like Paint. SolidWorks requires the skin image to be a bitmap file. When editing or creating a bitmap image, consider its size. The width of the FeatureManager snaps to about 190 pixels, so that is a good size to make the skin image. Once a bitmap is ready for use, put it in the SolidWorks Install Directory/data/skins. This new skin can be applied similar to how the FeatureManager color was chosen. Instead of choosing a color out of the FeatureManager Color drop-down list, choose a skin from the PropertyManager Skin drop-down.

A very important and often overlooked part of creating a skin is the buttons at the foreground. It's very important to have the ok, cancel, help, and pin buttons stand out from the background. If, for example, the chosen skin is red and the cancel button

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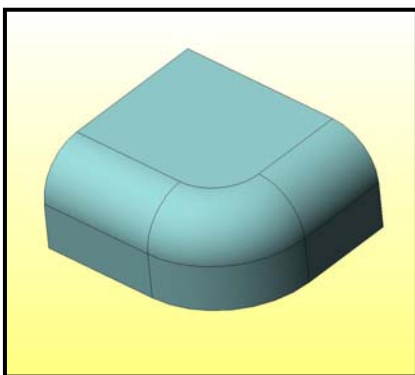
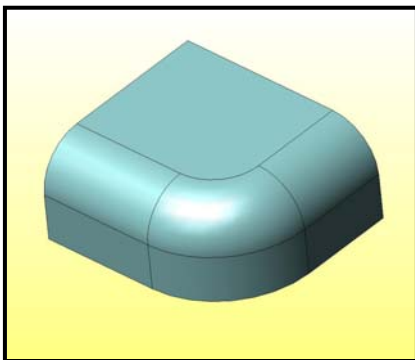
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is red, the cancel button will be camouflaged and lead to confusion and a decrease in user efficiency. The easiest way to go about creating buttons is to “steal” from an already existing skin. The best way to do that is to control select the 4 similar themed buttons (e.g.: Sand__Cancel.bmp, Sand__Help.bmp, Sand__OK.bmp, Sand__Pin.bmp) and do a control drag in the same folder to make a copy of those bitmap files. Rename the file in Windows Explorer and replace the “copy of” and the “stolen” skin name with the name of the new skin. It’s necessary that the button have the exact name as the corresponding skin, two underscores, the button function (cancel, help, ok, pin), and the file extension. Otherwise, the default buttons will be used. For example, if the skin is named red.bmp, the cancel button for that skin would be named red__cancel.bmp. This renaming would need to take place for each button.

Specularity

Have you ever noticed that with some parts or assemblies, when they are rotated at just the right angle, some faces change color? In specific, they go from the original color to almost white? This happens



because either directional or spot lights in the lighting folder have their specularity set at a high level. For viewing parts that don’t have an emphasis on curvy features, the specularity is more of a nuisance than a help. Specularity controls the extent to which shiny surfaces exhibit bright highlights where the light strikes them. With most blocky and easily machineable

parts, there aren’t any contours to show off with special lighting. Specularity on a part can be dialed all the way down to zero which creates an easy to work with matte finish on parts. To turn down a part’s specularity, expand the lighting folder in the FeatureManager design tree and edit the properties of

directional and spot lights. Simply slide the slider that controls specularity down to zero. When doing this the graphics area dynamically updates. The part noticeably has less “shine” with less specularity.

If there is the case of an assembly that would display best with some parts showing off their contours and others looking dull and matte, specularity and other properties cannot be globally controlled from the lighting folder like in a part. The visual or material properties of a part, just like color, can be controlled at the part level or the assembly level. To access the advanced color properties at the part level; in the part, go to Document Properties, Colors, click on Shading then the Advanced button. Here, there are many more sliders than were located on the Directional Light Properties dialogue box. This same box can be brought up for a part’s assembly specific colors by selecting the part’s Component Properties, Color, and then Advanced. In this dialogue box, the most commonly adjusted sliders are transparency and specularity. To become familiar with what the other sliders do, visit the Online Users Guide. When mastery of these controls is attained, the combination of lighting properties, light colors and part colors can produce some very attractive looking parts without the need of a photorealistic renderer like PhotoWorks. -(O|||O)-

SolidWorks Anagrams (unscramble)

3. all Jedi gourmet _____
New functionality with 2k1+ used when in a drawing that increases flexibility with placing notes where you want them
4. the stick fell _____
Apply this feature by either selecting a sketch vertex or the two entities that would intersect
5. its one stiff tee _____
One of a few ways to create a concentric circle in a sketch is with this command

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