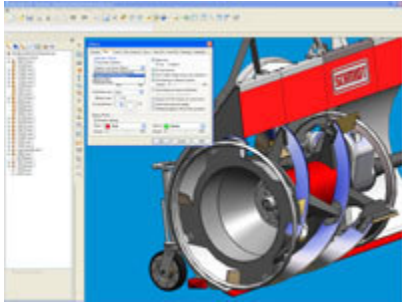


OPTIMIZING SOLID EDGE DISPLAY PERFORMANCE :: Displaying 3D data is among the most computationally intensive operations your computer performs. Solid Edge allows you to find the optimum balance among the factors that influence display speed and display quality, based on the capabilities of your computer.



Click image to enlarge.

Solid Edge is designed to use OpenGL for displaying 3D data. Most graphics cards are designed to accelerate OpenGL-based applications with little or no intervention from the application or user. You should use as much graphics card functionality and acceleration as possible to optimize both display speed and display quality. As display technologies and rendering techniques advance, most graphics card vendors take advantage of them. However, it is not always possible for older graphics cards to support new functionality efficiently, if at all.

To accommodate legacy configurations, Solid Edge provides several options to control the application display methods used to display 3D data. To modify the method Solid Edge uses to display graphics, on the Tools menu, select Options, and on the View tab of the Options dialog box, choose among the following options:

GRAPHICS CARD-DRIVEN (ADVANCED)

This option provides full acceleration for all 3D displays and should provide the smoothest display possible while dynamically manipulating graphical objects or editing profiles and sketches. In order to achieve this higher-quality display, Solid Edge requires a higher level of support from the graphics card. This support may not exist for older or less-expensive graphics cards. This option is designed specifically for use with the latest mid-range and high-end graphics cards.

GRAPHICS CARD-DRIVEN (BASIC)

This option provides full acceleration for all 3D displays and should provide a stable display across a wide variety of mid-range and high-end graphics cards. While all displays are hardware-accelerated, this option avoids accessing graphics requests that may not be widely supported or may not be supported consistently across all graphics cards. Choose this option if Solid Edge is unable to generate consistent displays when using the highest graphics card-driven option.

BACKING STORE

This option provides a mixture of graphics card-accelerated displays and software-generated displays. When you dynamically manipulate a view, Solid Edge directs all display requests to the graphics accelerator to provide the fastest frame rate possible. When the dynamic view manipulations are completed, the final display is generated using a slower, more stable software rendering method to provide a consistent display across all possible hardware configurations. Choose this option on older, legacy configurations, when working with graphics cards that are not specifically designed to support CAD applications (for example, gaming cards or consumer-level graphics cards) or if Solid Edge is unable to generate consistent displays with one of the graphics card-driven options.

SOFTWARE DRIVEN

This option is provided for diagnostic purposes only and should not be used for normal displays. The primary reason for this option is to help isolate the source of any graphic anomaly that might occur

in Solid Edge. In most cases, the graphics driver contains a flaw or is out of date and is the source of the display problem. This option should only be selected if directed by Support to verify such a condition.

AUTOMATICALLY SELECTING GRAPHICS CARDS

This is new in Solid Edge Version 16. You can improve system display by allowing Solid Edge to automatically select the appropriate graphics card during startup.

Solid Edge delivers the AutoConfigure.txt file to the Solid Edge program folder. This file contains information about widely used graphics cards such as the vendor, card name, driver version, default application display, and maximum application display. If you select the Automatic Selection option on the View tab of the Options dialog box, Solid Edge uses the information in the file to build the list of display options in the pull-down menu. For example, suppose the default setting for your installed graphics card is Graphics Card (Advanced). If you select the Automatic Selection option, Graphics Card Advanced is displayed in the graphics card setting field.

If your graphics card is *not* in the list in the AutoConfigure.txt file and you check the Automatic Selection option, the graphics card setting defaults to Backing Store. If your graphics card is *not* in the list in the AutoConfigure.txt file and you *do not* check the Automatic Selection option, the graphics card setting pull-down list contains all available settings.

If your graphics card is in the list in the AutoConfigure.txt file and you *do not* check the Automatic Selection option, the graphics card setting pull-down list contains all settings up to the maximum value for your card. For example, suppose the maximum value for your graphics card is Backing Store; the list contains Backing Store and Software-Driven.

NOTE

For more information on the contents of the AutoConfigure.txt file, you can view it in a text editor. However, the settings in this file are very sensitive and you should **not** edit them.

TROUBLESHOOTING

If you are dissatisfied with Solid Edge graphic display, do the following:

First, ensure you have the most recent graphic card driver from the manufacturer.

If display is still not optimal, choose a lower Application Display option from the list above.

If display is still not optimal, use the Windows display troubleshooting control to lessen hardware acceleration. On the Start menu, choose Settings, and then choose Display. On the Display Properties dialog box, on the Settings tab, click Advanced. On the dialog box that is displayed for your graphics card, on the Troubleshooting tab, set the Hardware Acceleration slider one or two notches less than Full. Setting the acceleration lower than this essentially places the entire burden of display on the central processing unit, slowing overall performance substantially.

Solid Edge Product Support

Leading Edge, September, 2004