About the Screen Saver

The Display Power Manager for Windows 3.1 provides a mechanism to control the amount of power used by a computer's monitor.   It provides a total of 5 levels of power savings.

The first level is a conventional screen saver that turns the screen black and bounces a logo around. The black screen provides substantial power savings and the animation lets you know that the computer is still active.

The other four levels of power savings are Reduced On, Stand By, Suspend and Off. They match the power saving modes defined by the VESA VBE/PM standard. As you move down from one mode to the next, the amount of power being saved is greater, but so is the amount of time that it takes for a monitor to recover and be ready to display data.

The screen saver will cycle through all of the selected power saving modes one after another until the maximum selected power saving mode has been reached. The number of minutes that is specified for each level is the number of minutes after the previous mode has been enabled. It is not the total time before entering that mode.

Special Considerations

Some of these power saving modes are intended for specific display types, so not all of them are available on all video controllers.   On some controllers, only the animated logo will be available.

For the power saving modes to have any effect beyond just blanking the screen, the monitor being used must have specific power saving features.

If the screen saver is in any of the power saving modes, moving the mouse will not wake it up. This is different from normal screen savers and is used to keep the monitor from waking up because of accidents such as bumping the desk that the computer is sitting on. This is especially important if the password option is enabled, since once the password dialog box pops up, it stays there until the user turns it off. This is a limitation of the Windows 3.1 screen saver interface.

Instructions

For instructions on using the Display Power Manager go to the section on Using the Screen Saver

Using the Screen Saver

When the screen saver is started, it will initially display a bouncing logo on a black background. To enable additional levels of power savings, select them from the 'Screen Saver Mode'   section of the Setup dialog box.

Screen Saver Mode

The 'Screen Saver Mode' section has four check boxes in it. They are <u>Reduced On</u>, <u>Stand By</u>, <u>Suspend</u> and <u>Off</u>. The screen saver detects the type of graphics controller that is being used and the types of power savings that it is capable of.

If the text immediately to the right of any of the check boxes is grayed out, that option is not available. If a power saving mode is available, then the text immediately to the right of the check box is black. If the box is selected with the mouse or the keyboard, the rest of the fields on the line wil also turn black. if the check box is deselected, the other fields turn gray.

The minutes field for each line can be changed only if the check box for that line is selected. The amount of time can be set for any number between 1 and 60. The number can either be typed directly, or by clicking on the up or down arrow next to the number. Holding the mouse button down on the arrow will quickly increase or decrease the minutes field.

The number of minutes that is specified for each level is the number of minutes after the previous mode has been enabled. It is not the total time before entering that mode.

If the screen saver is in any of the power saving modes, moving the mouse will not have any effect. This is different from normal screen savers and is used to keep the monitor from waking up because of accidents such as bumping the desk that the computer is sitting on. This is especially important if the password option is enabled, since once the password dialog box pops up, it stays there until the user turns it off. This is a limitation of the Windows 3.1 screen saver interface.

For the power saving modes to have any effect beyond just blanking the screen, the monitor being used must have specific power saving features.

Screen Saver Animation Speed

The scroll bar controls how fast the animation moves. The checkbox controls whether or not a bouncing sound will be played whenever the logo hits an edge of the screen.

Password Options

If the password checkbox is enabled, then the screen saver will prompt the user for a password before it quits. The password is the same one that is used for other Windows 3.1 screen savers.

The Energy Star Program

Energy Star is a program started by the EPA to promote energy efficiency. The goal of this program is to lower electricity usage by making computers and related hardware more energy efficient.

Computers currently use an estimated 5 percent of commercial electricity consumption. If no actions are taken, this could rise to 10 percent by the year 2000. Ironically, much of this electricity is wasted. Research shows that the vast majority of time personal computers are on, they are not actively in use. Additionally 30 - 40 percent are left running at night and on weekends.

Electricity generation accounts for 35 percent of all U.S. emissions of carbon dioxide - the most prevalent greenhouse gas. It also accounts for 75 percent and 38 percent of all U.S. emissions of sulfur dioxide of nitrogen oxides respectively - the two pollutants most responsible for acid rain.

By using more energy-efficient equipment in our homes, offices and factories, we can reduce this pollution - while saving money.

The Energy Star logo is used to mark computers, peripherals and software that have adopted the EPAs power saving guidelines.

For more information on the Energy Star program contact

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Reduced On Mode

Reduced On mode is an optional power saving state that allows the computer to use some power savings while still fully operational. Currently this is limited to some portable computers that can lower the power usage on their LCD displays. This causes some degradation of display quality.

Suspend Mode

Suspend mode is a mandatory state in which substantial power savings are achieved by the display. The trade off is that recovery times are longer then from Stand By mode.

It is enabled by blanking the screen and lowering the vertical rate to less then 10 Hz with less then a 25% duty cycle. There is no change to horizontal timing.

Stand By Mode

Stand By mode is an optional power saving state that gives minimal power savings, but provides the fastest recovery time.

It is enabled by blanking the screen and lowering the horizontal rate to less then 10 Hz with less then a 25% duty cycle. There is no change to vertical timing.

Off Mode

Off mode provides the highest level of power savings and the longest recovery times. With this mode the display is actually turned off so that recovery times are equivalent to switching the monitor on.

It is enabled by blanking the screen and lowering both the horizontal and vertical rates to less then 10 Hz with less then a 25% duty cycle.

VESA VBE/PM

The VESA VBE/PM is a software interface to the VESA (Video Electronics Standards Association) DPMS (Display Power Management Signalling) standard. For more information on VESA and these specifications contact them at

VESA
2150 North First Street
San Jose, Ca   95131-2029

Phone: (408)435-0333
Fax: (408)435-8225

Contents

THe following sections contain information about the Display Power Manager

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About the Screen Saver
Using the Screen Saver
The Energy Star Program

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