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Overview

Welcome to the most revolutionary productivity enhancement tool available for AutoDESK's AutoCAD R12 for Windows and AutoCAD LT for Windows.

Seamlessly integrated into the AutoCAD environment, your *POWERdraft for AutoCAD* driver offers significant improvements over existing driver technology. First, your *POWERdraft* driver provides the fastest and most reliable platform available for AutoCAD. Proven 32 bit display list technology and an intimate knowledge of your ELSA graphics adapter combine to provide an excellent solution for the most demanding AutoCAD for Windows users.

Additionally, your *POWERdraft* driver includes powerful utilities, the *SuperView*, *MagniView*, *MultiView* and the *Cockpit*, each designed to accent the AutoCAD drafting environment without inhibiting it. Fully dynamic and integrated through ELSA's [SmartFocus](#) technology, each utility is fully transparent to AutoCAD and available during any AutoCAD command.

***POWERdraft* [SuperView](#)**

This is an aerial view" that flies high above the rest. It's full resize ability makes it easy to place in a convenient yet unobstructive position for quick access to lightning fast zooms and pans. ELSA's SmartFocus eliminates Windows Focus problems and the dynamic viewport update aids in selecting your new view. Fully adjustable, the *SuperView* contents may be zoomed and panned, providing excellent usability while occupying minimum display area.

***POWERdraft* [MagniView](#)**

Unique among spy glass" devices, the *MagniView* offers maximum functionality with a minimum size. ELSA's SmartFocus technology makes the *MagniView* completely modeless allowing the *MagniView* to update dynamically, tracking the AutoCAD cursor to display a "zoomed in" view of the editing area. This magnified view can aid the drafter in picking AutoCAD entities including grips and other editing artifacts, or in finding special information within the drawing.

***POWERdraft* [Cockpit](#)**

A tool without equal, the *Cockpit* offers dynamic zooming and panning of the current viewport with just a flick of the mouse, even while sized small enough to fit within the AutoCAD scrolling area. Shaped to resemble two joy sticks, adjusting your view is as easy as pick, drag and release. Through ELSA's SmartFocus technology, the *Cockpit* is completely transparent and fully dynamic, making it perfect for small adjustments to your view while editing.

***POWERdraft* [MultiView](#)**

Enclosed within the *Cockpit* window, the *MultiView* offers a configurable visual history of previous views. Displaying a record of one to one hundred prior views, the *Multiview* represents each view visually on a button face. This gives instant access to any previous view and can be used to record and playback selected views consistently.

For Help on Help, Press F1

Overview

To open the *POWERdraft SuperView*, the commands **DSVIEWER** or **XBVIEW** may be used as well as the standard AutoCAD aerial view icon. Once activated, the *SuperView* utilizes two [grip frame](#) to describe the AutoCAD viewport being manipulated. The inner grip frame, called the Current View grip frame, is red by default. It represents the current view in the current AutoCAD viewport. The outer grip frame, called the *SuperView's* grip frame, is green by default. It represents the view of the current AutoCAD viewport's display list that will be used by the *SuperView* itself. The *SuperView's* view rectangle may be set differently for each AutoCAD viewport, as the current viewport changes, the *SuperView* will update accordingly.

Current View

The *SuperView* will always operate on the current AutoCAD viewport. The current viewport's view may be zoomed and panned by manipulating the grip frame.

To Zoom the current view, select any side of the Current View grip frame and drag to resize it. The current viewport will update dynamically to aid in selecting your new view.

To Pan the current view, select inside the Current View grip frame and drag to the desired location. The current viewport will update dynamically to aid in selecting your new view.

Picking Outside of the Current View grip frame will cause the current view to center around the point picked at its current zoom level.

SuperView's view

To change the *SuperView's* view, use the *SuperView's* grip frame. The ability to select the proper content for the *SuperView* to display allows it to be an effective viewing tool without obscuring the drawing area. By selecting a local working area for display, unnecessary information is excluded and more detail can be displayed.

To Zoom the *SuperView*, select on the *SuperView's* grip frame and drag to resize the view. When the grip frame is selected, the *SuperView* will zoom out leaving room for expansion.

To Pan the *SuperView*, pick **outside** of the *SuperView's* grip frame, the *SuperView* will zoom out leaving room to pan the view. **Holding down the SHIFT key** while selecting in the *SuperView* can be an easier way to **pan** the *SuperView*.

SuperView's Window

The *SuperView's* window titlebar may be toggled off by **double clicking** the **right mouse button** anywhere in the display area. Double clicking again will re-enable the disabled titlebar. **Turning off the titlebar** will give extra room for the *SuperView's* display. If the window titlebar is enabled, it will be used to display a **short help message** as the cursor moves over important features of the *SuperView*.

Configuration

The **dselsa.ini** file in your Windows directory can be used to configure the *SuperView*. *SuperView* options are in the section [\[SuperView\]](#).

Overview

To open the *POWERdraft MagniView*, the commands **MagniView** or **XGLAS** should be used. Once opened the *MagniView* will track AutoCAD's cursor in the current viewport updating its display dynamically. The *MagniView* uses a single [grip frame](#) to set the magnification factor. The *MagniView* allows different magnification factors to be set for different AutoCAD viewports, updating as the current viewport is changed. A special window, the Setting Menu, with an adjustable slider may also be used to adjust the magnification easier and with more accuracy.

Settings Menu

The Settings Menu may be opened by toggling the Settings Menu Flag on the *MagniView's* Windows System Menu button. Once opened, the Settings Menu will display a slider and three text output fields. The output fields represent the lower, upper and current settings of the slider. Manipulating the slider will change the magnification factor used by the *MagniView*. To set the magnification factor without changing the *MagniView's* display, use the **MVSET** or **XGLSET** command. These commands freeze the cross hair position, which allows you to adjust the magnification factor at the current drawing position.

Other Features

The *POWERdraft MagniView* can also be used as a "World View" window. Setting the magnification factor to a value less than -1 will cause the *MagniView* to zoom out from the current viewport. The *MagniView* will continue to track the AutoCAD cursor which can result in the *MagniView* displaying information that is currently out of view in an "edge panning" like mode. This mode is useful if you work with high zoom depth.

MagniView's Window

The *MagniView's* window titlebar may be toggled off by **double clicking** the **right mouse button** anywhere in the display area. Double clicking again will re-enable the disabled titlebar. **Turning of the titlebar** will give extra room for the *MagniView's* display. If the window titlebar is enabled, it will be used to display a **short help message** as the cursor moves over important features of the *MagniView*.

Configuration

The **dselsa.ini** file in your Windows directory can be used to configure the *MagniView*. *MagniView* options are in the section [\[MagniView\]](#).

Overview

To open the *POWERdraft Cockpit*, use the **Cockpit** command. Once opened, the *Cockpit* offers two "joy stick" like devices and a slider. If enabled, the *MultiView* is also included in the *Cockpit's* window. The two "joy sticks" are used for zooming and panning the current AutoCAD viewport. This tool can be especially valuable on screens with little room to spare as it offers full dynamic zooming and panning functionality in a compact space.

To move the *Cockpit* on the screen, click the green rectangle and drag to the new position. **To close** the *Cockpit*, click once inside its window to give it the focus and press Alt-F4 with the cursor still inside the *Cockpit* window.

Dynamic Panning

To pan the current viewport, simply select the knob of the two dimensional joy stick and drag. The current viewport will pan in the direction of your drag at a speed proportional to angle your drag. The farther the joy stick handle is "depressed" the faster the viewport will pan.

Dynamic Zooming

To Zoom the current viewport, simply select the knob of the smaller, one dimensional joy stick and drag. Depressing the joy stick upwards will zoom deeper into the current view, pulling back on the stick will zoom out. The speed of the dynamic zoom is proportional to the depression of the joy stick.

Acceleration

To adjust the speed range available when zooming and panning, set the knob of the acceleration slider. The lower the knob, the lower the increment that the joy sticks will use to zoom or pan the view.

Configuration

The **dselsa.ini** file in your Windows directory can be used to configure the *Cockpit*. *Cockpit* options are in the section **[Cockpit]**.

Overview

An element of the *Cockpit* display, the *MultiView* view history array offers a selection of prior views for recall. Each button holds a visual representation of the view that it would recall. The number of views stored is configurable via the **dselsa.ini** file. Recalling any view displayed by the *MultiView* is as simple as picking the desired view. That view will be sent to the current AutoCAD viewport.

Configuration

The **dselsa.ini** file in your Windows directory can be used to configure the *MultiView*. All options for the *MultiView* are in the section **[Cockpit]**.

SmartFocus

ELSA's SmartFocus technology, used in all POWERdraft windows, eliminates the switching of Windows input focus between POWERdraft utilities and AutoCAD's drafting window. After having used a function in one of the utilities, keyboard input or cross hair movements will make AutoCAD's window the active window immediately. An explicit click as in other drivers is not required.

Grip Frame

A grip frame is a colored rectangular frame used to describe a view. It has three separate functional areas, inside the rectangle, on the rectangle itself, and outside the rectangle. A grip frame may typically be resized by picking and dragging the frame much like a Windows window. Other functionality offered depends on the view the grip frame represents.

The driver supports AutoCAD R12 for Windows 3.1x and AutoCAD LT Releases 1 and 2 for Windows 3.1x and AutoCAD LT Release 2 for Windows 95.

Requirements

To install the ELSA *POWERdraft* driver you need:

- Microsoft Windows Version 3.1 or 3.11 or Microsoft Windows 95
- for Windows 3.1/3.11: Microsoft Win32s and AutoCAD Release 12 for Windows or AutoCAD LT (Release 1 or 2) for Windows, previously installed
- for Windows 95: AutoCAD LT Release 2, previously installed
- ELSA *WINNER* or ELSA *GLoria* graphics controller
- ELSA's display driver for the used Windows version
- CD ELSAware or floppy disk *POWERdraft* for AutoCAD

Installation

- Under Windows 3.1x *POWERdraft* for AutoCAD R12 needs the Microsoft Win32s system. It may be necessary to install Win32s before installing *POWERdraft* (see next paragraph).
- Start the program SETUP.EXE in Windows from the driver directory on CD or disk.
- Select the language to be used in the installation dialogs.
- SETUP finds your AutoCAD by reading the association for the file extension DWG. Correct the path if you want to install for another AutoCAD. Detection of AutoCAD R12/Win vs. AutoCAD LT is automatic.

Win32s for Windows 3.1x

- Under Windows 3.1x the Microsoft Win32s system is needed. We recommend Win32s version 1.25.142 or newer. If no Win32s or an old Win32s is installed on your computer, you must install/update Win32s before installing *POWERdraft*.
- If you don't know, whether you have already installed a proper version of Win32s, you may simply start *POWERdraft* SETUP.EXE. If Setup finds no Win32s or an old version, it will tell you and nothing will be installed.
- You can retrieve an installable Win32s from where you found *POWERdraft* for AutoCAD R12.

AutoCAD R12 for Windows 3.1x

- You should install the driver into a separate directory. The Variable ACADDRV will be extended automatically. **Remember to select the driver in AutoCADs configuration dialog!**
- SETUP creates a driver help icon in your program manager's AutoCAD group.

AutoCAD LT for Windows 3.1x / 95

- The driver will be installed in the AutoCAD LT directory. An existing driver will be renamed.
- SETUP creates a driver help icon in your program manager's AutoCAD LT group.

- Two icons are added to the toolbar: C for the Cockpit and M for the MagniView. The Arial View icon will open the SuperView.

NOTE: The driver is based on ELSA's *POWERlib*, a driver independant, fast graphics library. Since other applications and drivers use it, this component may already be installed on your system. In the unlikely event of an incompatibility with an existing *POWERlib*, the SETUP will inform you and let you decide whether to continue the installation or abort. The SETUP program will show the names of the applications which will be affected if you continue the installation.

POWERdraft for AutoCAD defines additional Commands to be used in AutoCAD.

- COCKPIT** Opens the *Cockpit*
- SUPERVIEW** Opens the *SuperView*,
the commands DSVIEWER and XBVIEW
are defined for compatibility reasons.
- MAGNIVIEW** Opens the *MagniView*,
the Command XGLAS is defined
for compatibility reasons.
- MVSET** Freezes the position of the cross hair
cursor to allow you to adjust the magnification
factor at the current position in the drawing.
The command XGLSET is defined too.
- XOPT** Optimizes the display list;
the memory used by deleted drawing entities
is freed. Use this command if you disabled
the background optimization
(see chapter [\[Optimize\]](#)).

Your *POWERdraft* for AutoCAD is configured through the **dselsa.ini** file located in your Windows directory. The file contains options for controlling the behavior and appearance of your *POWERdraft* driver and may be altered with a text editor such as Notepad.

NOTE: Do not edit dselsa.ini when the driver is in use, as the driver will overwrite your changes when it terminates.

The section **[SuperView]** contains options for configuring the *SuperView*.

The section **[MagniView]** contains options for configuring the *MagniView*.

The section **[Cockpit]** contains options for configuring the *Cockpit* and the *MultiView* view history array.

The section **[Options]** contains options for configuring special *POWERdraft* features.

The section **[Optimize]** contains options for configuring *POWERdraft*'s display list optimization feature.

Using Control Characters

Control characters may be used in *POWERdraft* strings by prefacing the desired character with a "^". Examples of this are "^S" which is the <SPACE> character, "^M" the <CARRIAGE RETURN> character, and "^C" the <Control-C> character.

The following settings are shown with their default values.

[SuperView]

Position = ?,?,?,? (right justified in your AutoCAD window, above *MagniView*)

Four integers separated by commas describe the position to open the *SuperView*.

UpdateFreq = 1

Influences the rate at which the *SuperView* dynamically updates. Lower values update less frequently, higher values update more frequently. The valid range is 1 through 100.

Caption = 1

Either 1 or 0, this option is the flag controlling the *SuperView's* titlebar. A value of 0 disables the titlebar, a value of 1 will enable it.

BackgrdColor = 7 (white)

An AutoCAD color number here will change the background (offscreen area) which is used by the *SuperView*.

OutFrameColor = 3 (green)

Specifying an AutoCAD color number here will set the color to be used for the *SuperView's* grip frame.

InFrameColor = 1 (red)

Specifying an AutoCAD color number here will set the color to be used for the Current View's grip frame.

The following settings are shown with their default values.

[MagniView]

Position = ?,?,?,? (right justified in your AutoCAD window, above *Cockpit*)

Four integers separated by commas describe the position to open the *MagniView*.

Caption = 1

Either 1 or 0, this option is the flag controlling the *MagniView's* titlebar. A value of 0 disables the titlebar, a value of 1 will enable it.

BackgrdColor = 7 (white)

An AutoCAD color number here will change the background (offscreen area) which is used by the *MagniView*.

FrameColor = 1 (red)

Specifying an AutoCAD color number here will set the color to be used for the *MagniView's* grip frame.

MagLevelX10 = 200

An integer here specifies the magnification factor for the *MagniView* multiplied by 10, e.g. 200 is a factor of 20.0.

ShowSettings = 0

This flag determines whether the Settings Menu will be displayed when the *MagniView* is invoked.

The following settings are shown with their default values.

[Cockpit]

Position = ?,?,?,? (lower-right justified in the AutoCAD window)

Four integers separated by commas describe the position to open the *Cockpit*.

History = 1

This flag enables the *MultiView*.

HistoryReenter = 0

The state of this flag determines whether views invoked by the *MultiView* are again entered into the *MultiView*.

HistorySize = 4,3

Two integers, separated by commas, give the number of button rows and columns in the *MultiView*. Values ranging from 1,1 to 10,10 are allowed.

The following settings are shown with their default values.

[Options]

Control-L = MVSET^s

The *POWERdraft* driver offers assignable Control-L functionality. Pressing the <Control-L> keys during an AutoCAD session cause the command contained here to be sent to AutoCAD. The string may contain [control characters](#) and should end with a space (^s) or a carriage return (^m) to cause AutoCAD to execute the string.

AutoStart = COCKPIT^s

This option is used by *POWERdraft* in order to store the running states of the *SuperView*, *MagniView*, and *Cockpit* tools.

[Optimize]

DeleteCount = 100

The number of deleted vectors to allow before *POWERdraft* optimizes its display list. The value 0 disables automatic display list optimizations.

DeleteDelay = 5000

The number of milliseconds to delay before a DeleteCount triggered optimization is begun. Additional vector deletions within the delay restart the timer.

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This help file describes *POWERdraft for AutoCAD R12* and *POWERdraft for AutoCAD LT* version 1.04.

Changes from Version 1.00 to Version 1.01

- After reducing the display resolution it was possible to have driver windows off screen. This is fixed.
- A bug in AutoCAD resulted in only 16 colors being used if Windows was configured for a true or high color mode. AutoCAD now uses 256 colors.
- Editing performance has been increased.
- During regens sometimes drawing entities were drawn over the top and right borders of the viewport.
- The option "Virtual Screen" is now supported by POWERdraft for AutoCAD under TWINman.
- The SETUP Program was unstable.

Changes from Version 1.01 to Version 1.02

- The driver was extended to support AutoCAD LT.
- There were some problems with the installation program SETUP.
- The driver can now be used together with the multi screen driver MULTIman.

Changes from Version 1.02 to Version 1.03

- The command VPOINT did not always display the cursor.
- Edit performance has been significantly increased.
- Support for ELSA's new generation of graphics boards was added.

Changes from Version 1.03 to Version 1.04

- The driver was extended to support AutoCAD LT Release 2.
- Some colors in Renderings were displayed wrong.

Changes from Version 1.04 to Version 1.05

- The driver now supports AutoCAD LT Release 2 under Windows 95.
- Plot-Preview has been improved.
- Several crosshair problems are fixed.

Updates to the Manual

Early copies of the manual do not describe how to move and close the *Cockpit*. You find this information in the chapter *Cockpit* in this help file.

