Quick Start

Overview

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 **SuperView or XBVIEW** may be used as well as the standard AutoCAD aerial view icon. Once activated, the *SuperView* utilizes two grip frames 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 the 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 *SuperView* has some configurable options that can be set in the configuration dialog. A complete description can be found on the corresponding help page.

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 it's display dynamically. The *MagniView* displays the current magnification factor in an editible text field. Edit this text field to set the magnification factor to specific values.
Another way to set the **magnification factor** is the slider at the bottom of *MagniView*'s window. Manipulating the slider will change the magnification factor used by the *MagniView,* the text field immediately displays the numerical value.
To set a specific magnification factor you can use the command "**MVSETm.n**"; e.g. to set a factor of 3.5 type "MVSET3.5"
The *MagniView* maginifcation factor may be set **GLOBAL** or **LOCAL**. Using **LOCAL** mode allows the *MagniView* to use different magnification factors in each AutoCAD viewport, updating as the current viewport is changed. In **GLOBAL** mode the current magnification level is used in all open viewports. The mode may be toggled by double clicking in the mode field of the *MagniView's*   status bar.

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 off 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 *MagniView* has some configurable options that can be set in the configuration dialog. A complete description can be found on the corresponding help page.

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.

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.

Cockpit's Window

The *Cockpit's* window titlebar may be toggled on by **double clicking** the **right mouse button** on the ELSA logo. Double clicking again will hide the titlebar. **Turning off the titlebar** will give extra room for the *Cockpit's* display. If the window titlebar is enabled, it may be used to **move** or **close** the *Cockpit*. With the titlebar disabled, you can move it by dragging the ELSA logo. A double click of the left mouse button on the green rectangle will close the *Cockpit*.

Configuration

The *Cockpit* has some configurable options that can be set in the configuration dialog. A complete description can be found on the corresponding help page.

<u>Overview</u>

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 configuration dialog. 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.

<u>Configuration</u>

The *MultiView* has some configurable options that can be set in the configuration dialog. A complete description can be found on the corresponding help page.

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 R13 for Windows 3.1/3.11 (Win32s) and AutoCAD R13 for Windows NT 3.5/3.51 and AutoCAD R13c4 for Windows 95.

Requirements
To install the ELSA *POWERdraft* driver you need:
- Microsoft Windows Version 3.1/3.11 or Microsoft Windows NT 3.5/3.51 or Microsoft Windows 95
- ELSA *WINNER* or ELSA GLoria graphics controller
- ELSA's display driver for the used Windows version
- AutoCAD Release 13 for Windows previously installed. For Windows 95 you need at least R13c4.
- CD ELSAware or floppy disk *POWERdraft* for AutoCAD R13

Installation
- 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.

You should install the driver into a separate directory. The variable ACADDRV will be extended automatically. **Remember to select the driver in AutoCAD's configuration dialog!**

SETUP creates a driver help icon in your program managers AutoCAD R13 group.

NOTE:

The driver is based on ELSA's POWERlib, a driver independent, 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 command XBVIEW is defined for compatibility reasons.
MAGNIVIEW	Opens the *MagniView*, the Command XGLAS is defined for compatibility reasons.
MVSETm.n	Sets the factor m.n as the new magnification factor for *MagniView*.
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 **Configuration: DL Optimization**).

Your *POWERdraft* for AutoCAD is configured through the configuration dialog that is automatically opened when you select the *POWERdraft* driver on AutoCAD's configuration screen. The dialog allows you to control the behavior and appearance of your *POWERdraft* driver.

NOTE: The configuration dialog writes the settings to the file dselsa13.ini in your Windows directory. Do not edit dselsa13.ini when the driver is in use, as the driver will overwrite your changes when it terminates.

The dialog is divided into four sections.

The section **Configuration: Cockpit** describes the options for configuring the *Cockpit* and the *MultiView* view history array.

The section **Configuration: SuperView** describes the options for configuring the *SuperView.*

The section **Configuration: MagniView** describes the options for configuring the *MagniView*.

The section **Configuration: DL Optimization** describes the options for configuring the background process that permanently optimizes the display lists.

You can turn the *Cockpit* **on** or off. The **tile bar** can be enabled to make moving and closing easier or disabled to preserve display space.

You can enable or disable the **zoom and pan sticks** as well as the *MultiView*. It is not possible to turn off both at the same time; the sticks will be automatically re-enabled in this case. Two edit fields allow you to set the number of button **rows and columns** for the *MultiView*.

The corresponding values of **dselsa13.ini** are:

	section	value
Cockpit On	[POWERdraft]	Cockpit (0, 1)
Titlebar	[Cockpit]	Caption (0, 1)
Pan & Zoom Sticks	[Cockpit]	Sticks (0, 1)
MultiView	[Cockpit]	History (0, 1)
MultiView Rows x Columns	[Cockpit]	HistorySize (1,1 .. 10,10)

Please refer to the sections *Cockpit* and *MultiView* for a general description of these features.

You can turn the *SuperView* **on** or off. The **tile bar** can be enabled to show short help messages or disabled to preserve display space.

The buttons **Viewport** and **SuperView** open a color selection dialog. You can select the colors of the grip frames for the viewport and the *SuperView*. The current color selection is displayed as a frame around the corresponding button.

The corresponding values of **dselsa13.ini** are:

	section	value
SuperView On	[POWERdraft]	SuperView (0, 1)
Titlebar	[SuperView]	Caption (0, 1)
Viewport Frame colot	[SuperView]	InFrameColor (0..255)
SuperView Frame colot	[SuperView]	OutFrameColor (0..255)

Please refer to the section *SuperView* for a general description of this feature.

You can turn the *MagniView* **on** or off. The **tile bar** can be enabled to show short help messages or disabled to preserve display space.

You can preset the magnification factor used by the *MagniView*.

The corresponding values of **dselsa13.ini** are:

	section	value
MagniView On	[POWERdraft]	MagniView (0, 1)
Titlebar	[MagniView]	Caption (0, 1)
Magnification	[MagniView]	MagLevel (1.00 .. 99.00)

Please refer to the section *MagniView* for a general description of this feature.

To keep memory consumtion as low as possible the *POWERdraft* driver uses a low priority background process to permanently optimize the display list. You can set the **count** of vectors or polygons that must be deleted or edited to schedule an optimization. The optimization is scheduled to be started after a configurable **delay** to allow ongoing edit operations to finish first.
Setting Delete Count to 0 will disable automatic display list optimization. You can manually start an optimization, e.g. after deletion of bigger parts of your drawing, by using the command **XOPT**.

The corresponding values of **dselsa13.ini** are:

	section	value
Delete Count	[POWERdraft]	DeleteCount (0..2000000000)
Delay [msec]	[POWERdraft]	DeleteDelay (0..2000000000)

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This help file describes *POWERdraft for AutoCAD R13* version 1.01.

Changes from Version 1.00 to Version 1.01

- Windows NT dual screen support is added. Please make sure you use ELSA display driver for Windows NT version 3.59 or later.
- Cross hair display in video modes with more than 256 colors is fixed.
- Save render image has been added.
- The driver was ported to DEC Alpha, will be shipped as a separate driver.
- Plot preview is fixed.
- Clearing of non-orthogonal cursors in case of overlapping windows is fixed.
- The screen menu area is restored properly.
- Windows 95 is supported.

Known problems

- Windows 3.1/3.11 only: When you reconfigure *POWERdraft for AutoCAD R13* you must exit and restart AutoCAD. A problem in Microsoft Win32s does not allow the driver to be started two times in a row.
- Our tests showed that AutoCAD R13 is more stable in the Windows NT environment. For Windows 3.1x you should use R13c2 or higher.
- Under Windows 3.1x you should avoid full screen DOS boxes while POWERdraft is running. Windowed DOS boxes are uncritical, however.

Updates to the Manual

(none)