

# ***AutoVue Desktop Edition***

## ***Installation and Administration Manual***

# Support Information

If you have any questions or require support for AutoVue please contact your system administrator. Some customization and maintenance must be done on the server side and cannot be implemented on the client machine. If the administrator is unable to resolve the issue, please contact Cimmetry Systems Corp.

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# Installation

This chapter describes the recommended system requirements and installation procedures for AutoVue.

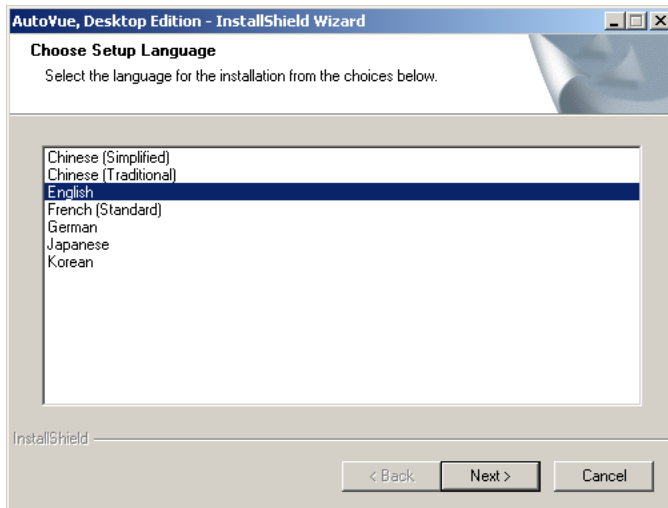
## System Requirements

- A personal computer with a minimum Intel Pentium CPU, 256 MB RAM
- Microsoft Windows 2000, 2003, XP, or Vista 32-bit
- A hard disk with at least 300 MB of free space

**Note** The memory requirement is dependent on the size and complexity of files you are trying to view with AutoVue.

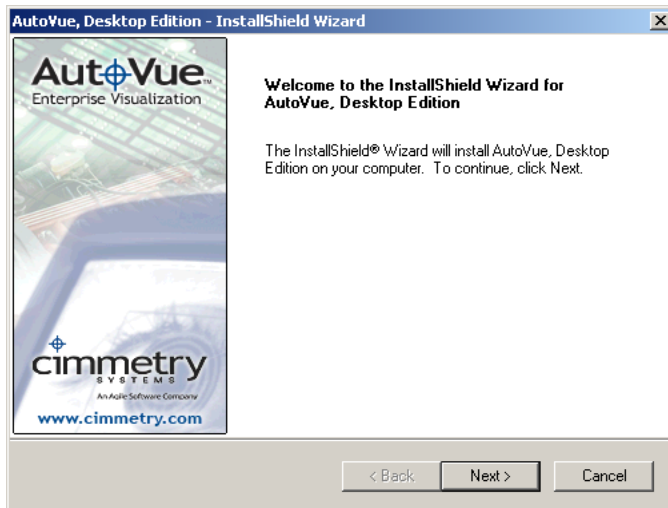
## Installing AutoVue

- 1 If you have the AutoVue CD, insert it into the CD ROM drive to run the executable that is on the CD.
- 2 If you are downloading AutoVue from a download site, double-click the executable to install AutoVue.
- 3 The **InstallShield Wizard** dialog appears.

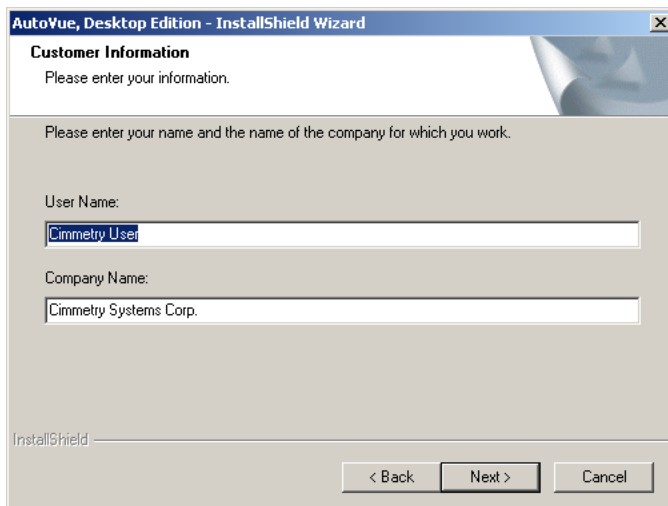


- 4 Select the language of AutoVue you want to install, then click **Next**.

The **AutoVue Welcome** dialog appears.



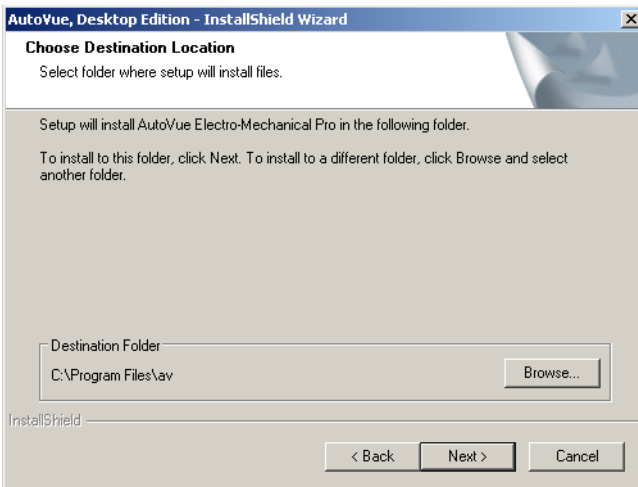
- 5 Read the dialog, then click **Next**.  
The **License Agreement** dialog appears.
- 6 Read the **License Agreement**, then click **Yes** to accept terms.  
The **Customer Information** dialog appears.



- 7 Enter your **User Name** and **Company Name**, then click **Next**.



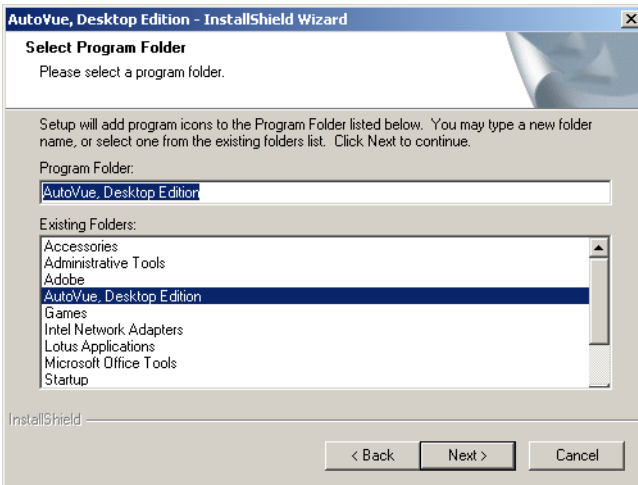
The **Destination Location** dialog appears.



- 8 The default directory where AutoVue will be installed is **C:\Program Files\av**. To accept this location, click **Next** in the **Destination Location** dialog.

**Note** If you would like to install AutoVue elsewhere, click **Browse** and select the desired location, then click **Next** in the **Destination Location** dialog.

The **Select Program Folder** dialog appears.



- 9 Enter a **Program Folder** that will contain AutoVue program icons or accept the default folder, then click **Next**.  
A dialog appears informing you that the setup program is performing the requested operations.
- 10 Click **Finish** to complete the installation.

## Setting up AutoVue for a Silent Installation

AutoVue can be set up to run in a “silent install” mode. All the parameters needed for the installation are specified in a file which when called upon runs the installation setup without the need for user input.

## Setting up AutoVue for a Silent Installation on Client Machines

- 1 Go to the directory where **avsetup.exe** is located.
- 2 At the command prompt, enter **avsetup.exe -a -r**.  
The AutoVue setup program is launched.
- 3 Continue the installation setup, answering all the prompts from AutoVue’s setup program. See [Installing AutoVue](#).  
When the installation setup program is complete, the parameters file called **setup.iss** is stored in the Windows directory. This file contains the user input from the installation and it looks like this:

```
[InstallShield Silent]
Version=v7.00
File=Response File
[File Transfer]
OverwrittenReadOnly=NoToAll
[DlgOrder]
Dlg0=SdWelcome-0
Count=8
Dlg1=AskText-0
Dlg2=SdLicense-0
Dlg3=SdRegisterUser-0
Dlg4=SdAskDestPath-0
Dlg5=SdSelectFolder-0
[SdWelcome-0]
```

```
Result=1
[AskText-01]
szText=<<>>>
Result=1
[SdLicense-0]
Result=1
[SdRegisterUser-0]
szName=Cimmetry User
szCompany=Cimmetry Systems Inc.
Result=1
[SdAskDestPath-0]
szDir=<<>>>
Result=1
[SdSelectFolder-0]
szFolder=AutoVue, Desktop Edition
Result=12
[Application]
Name=AutoVue, Desktop Edition
Version=19.1
Company=<<>>>
Lang=0009
```

**Where:**

<b>&lt;&lt;<license key="">&gt;&gt;&gt;</license></b>	Should be set to the actual license key used.
<b>&lt;&lt;<installdir>&gt;&gt;&gt;</installdir></b>	Should be the directory where AutoVue is to be installed.
<b>&lt;&lt;<company>&gt;&gt;&gt;</company></b>	Should be the company name entered.

- 4 To run the silent install on the client machine, type the following line at the command prompt:

**avsetup.exe -a -s -f1 C:\windows\setup.iss**

**Note** Make sure you enter the number "1" after "f," not the letter L.

## Release Notes

The Release Notes contain last minute information that may not be included in the manuals. You can access this file after running the installation procedure. Just select the Release Notes icon from the AutoVue group.

---

# Help Features

AutoVue provides a **Help** menu that allows you to easily access information on how to use AutoVue.

From the **Help About** dialog, you can see information about your current installation of AutoVue. Information such as the variation of AutoVue you are using, the version, the build number and the current language that AutoVue is running is displayed. You can also change the localization of the AutoVue user interface.

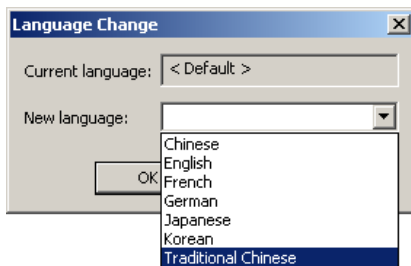
# Changing the Locale of AutoVue

AutoVue supports different localizations for the User Interface. If you wish to switch to a different language, you can do so from the **Help -> About** dialog. AutoVue supports the following localizations:

- English
- French
- German
- Simplified and Traditional Chinese
- Japanese
- Korean

Take the following steps to switch to a different language:

- 1 Select **Help > About** from the AutoVue main menu.  
The **About** dialog appears.
- 2 Click **Change Language**.  
The **Language Change** dialog appears.



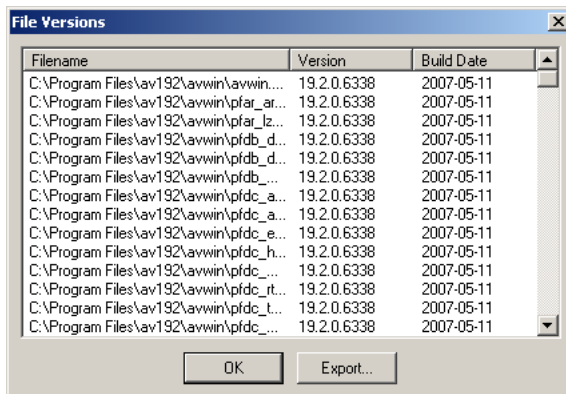
- 3 From the **New Language** drop-down list, select the language you want to change to.
- 4 Click **OK**.
- 5 Click **OK** in the **About** dialog.
- 6 Restart AutoVue for the new localization to take effect.

# Viewing and Exporting File Versions Information

With AutoVue you can view the version, build number and date of the component .dll files, as well as export the results into a text file.

## Viewing File Versions

- 1 Select **Help > About** from the AutoVue main menu.  
The **About** dialog appears
- 2 Click **Version Info**.  
The **File Versions** dialog appears.



- 3 When you finish viewing, click **OK**.

## Exporting File Versions

- 1 Select **Help > About** from the AutoVue main menu.  
The **About** dialog appears.
- 2 Click **Version Info**.  
The **File Versions** dialog appears.
- 3 Click **Export**.  
The **Export** dialog appears.
- 4 Navigate and select the directory you want to export the file to.
- 5 Enter a **File name** with the extension **.txt** or accept the default.

**Note** The file can only be exported to text file.

- 6 Click **Save**.

The export result is exported to the selected directory.




# Command Line Options

You may change the behavior of AutoVue on startup with Command Line options. Simply follow the instruction set corresponding to your computer's operating system.

## Customizing AutoVue Startup

There are two possibilities:

- 1 Right-click the AutoVue icon  in the Windows group.
- 2 Select **Properties**.
- 3 Click the **Shortcut** tab.
- 4 Enter the Command Line options after the filename and path provided for you in the **Target** text box.
- 5 Click **Apply**.

*or*

- 1 Select **Run** from the **Start** menu.
- 2 Take one of the following steps:
  - Click **Browse** and browse to the location AutoVue (avwin.exe) is installed.
  - Enter the full path where AutoVue (avwin.exe) is installed.  
For example: C:\Program Files\av\avwin.exe
- 3 Click **OK**.

## Syntax

Syntax	Description
<angular brackets>	Indicate required entries, but are not included with the entered information.
{curly braces}	Indicate optional entries that may or may not to be included in the command.
[square brackets]	Are required syntactical elements and <i>should</i> be included in the command.
(parentheses)	Are required syntactical elements and <i>should</i> be included in the command.
<b>Bold</b>	Introduces a literal expression and must be entered exactly as shown.
<i>Italics</i>	Indicates a variable that must be replaced by the information you supply.
	Indicates a choice between two selections; this symbol is not entered.
...	Indicates that information may be repeated; this symbol is not entered.

## Commands

Command	Description
{file1...}	Lists the files to show on startup: <b>avwin [filename1][filename2]</b> One or more filenames can be specified as startup parameters. These files will automatically be opened and viewed by AutoVue.
{-c cfgfile} or {/c cfgfile}	Specifies the path and configuration file to use: <b>avwin -c inifilename</b>
{-lastfile=fname} or {/lastfile=fname}	Writes the name of the last file viewed into the file name.

<b>{-hide}</b> or <b>{/hide}</b>	Does not display the AutoVue user interface on the desktop.
<b>{-maximizes}</b> or <b>{/maximizes}</b>	Displays a maximized AutoVue user interface on the desktop.
<b>{-minimizes}</b> or <b>{/minimizes}</b>	Displays a minimized AutoVue user interface on the desktop.
<b>{-p [nnn-mmm] filename}</b> or <b>{/p [nnn-mmm] filename}</b>	<p>Prints the page range of the specified file from nnn to mmm.</p> <p><b>avwin -p [pagerange] filename</b></p> <p>Specifying the <b>-p</b> option makes AutoVue print the filename given with the current default print settings. The file is automatically opened, printed and closed. The pagerange argument is optional. If not specified, all pages are printed by default. The pagerange is in the format: n1 or n2-n3.</p> <p><b>Example:</b></p> <p><b>avwin -p [2-5] myfile.doc</b> would print pages 2 to 5 both inclusive of the file “<b>myfile.doc</b>”.</p>
<b>{-restore}</b> <b>{/restore}</b>	Displays the AutoVue user interface on the desktop at the original size.
<b>{-s scriptfile}</b> or <b>{/s scriptfile}</b>	<p>Specifies a script file to run on startup: Automatically executes the specified script file on startup.</p> <p><b>Example: avwin -s scriptfile</b></p>
<b>{-search}</b> <b>{/search}</b>	<p>The <b>/search</b> option automatically initiates a search on the filename given. If the string is found, the text is automatically scrolled to view and the found text is highlighted. Once the text has been found, you can use the F3 function key to find the next search hit within the document. <b>avwin filename -search searchstring</b></p>

---

<code>{-f filename}</code>	The filename refers to a file that contains a list of files to which AutoVue has access. This file must be in ASCII text and spell out the path of the authorized files at the beginning of each line.
or	
<code>{#f filename}</code>	

---

# Initialization File Configuration

## INI File Configuration

AutoVue stores its runtime settings in a configuration file. This file is by default located in the Windows directory and named **avwin.ini**. The name can be changed with the Command Line options. By presetting AutoVue's INI file, integrators can set up defaults for various operations. Examples include setting up defaults for conversion (output format, output file, etc.), setting up defaults for viewing and printing etc.

After AutoVue is installed and run for the first time on a workstation, this file is created under the Windows directory. The INI file has several sections. Each section heading is enclosed in square brackets. The sections that are listed in this chapter may be changed. Any other sections **must remain unchanged** for AutoVue to operate properly.

## Creating an Alternative INI File

- 1 Open the **avwin.ini** file.
- 2 Create and name a copy of the file.  
**Example:** avwin2.ini  
**Note** This is done so that the original **avwin.ini** file is available as a default file for AutoVue.
- 3 Open the file in any text editor, such as Notepad.
- 4 Locate the section heading corresponding to the changes you want to make.  
**Example:** [Markup Options]
- 5 Modify the command line if it already exists or add the new command line.  
**Example:** INFO\_USER=Name of Author
- 6 Save the changes to **avwin2.ini** and close the file.
- 7 Direct AutoVue to use **avwin2.ini** as the configuration file with the command line **-C avwin2.ini**.

## Network Configuration

When AutoVue is installed on a network, each user can specify his or her own configuration file. By default, a user's configuration file is named Avwin.ini and is located in the local Windows directory. The name and path to the configuration

file can be changed so that each user has a configuration file. This is specified using the -C Command Line option.

**Example:**

Assuming that AutoVue is installed on a Network drive named U, two users could have their own settings and configuration files.

- User1 setting where **User1.ini** is the configuration file:

**U:\AutoVue\avwin\avwin.exe -C C:\AutoVue\user1.ini**

- User2 setting where **User2.ini** is the configuration file:

**U:\AutoVue\avwin\avwin.exe -C C:\AutoVue\user2.ini**

**Note** Place paths with spaces between double quotation marks.

# INI Options

In the following sections, option section headers are indicated in brackets []. Section headers in the INI file must be specified in brackets. The options for the section are discussed in the table below the section header.

## Acrobat PDF Options

Configure Acrobat PDF file options.

[Options]

Parameter	Description	Default
OverridePDFPrintSecurity = <0 1>	Set to <b>1</b> if you wish to print document even if the PDF file is print-protected.	0
PDFCACHELEVEL = <None Low Medium High>	Customize the level of caching of PDF font glyph bitmaps to improve performance. Specify one of the four caching levels: <b>None</b> - Fonts are not cached (least memory used). <b>Low</b> - Up to 2 fonts cached (up to 3 text sizes per font, up to 200KB of memory). <b>Medium</b> - Up to 4 fonts cached (up to 6 sizes per font, up to 800KB of memory). <b>High</b> - Up to 8 fonts cached (up to 6 sizes per font, up to 1.5MB of memory) The higher the level of caching, the faster the text displays; however memory usage is also higher.	Medium
PDFDPIRESOLUTION = <dpi>	Defines the dpi resolution (dots per inch) for rendering PDF pages on screen. It can be set to any value between 72 and 1224.	360

Parameter	Description	Default
USEEXCHANGE = <0 1>	<p><b>0</b> - Uses AutoVue's built-in PDF viewer.</p> <p><b>1</b> - If Adobe Exchange is installed, then AutoVue will use Exchange's viewer to display PDF files.</p> <p><b>Note</b> If you installed AutoVue before Adobe, you need to copy csipdf.dll and csipdfex.dll to the Acrobat plugins folder and rename them csipdf.api and csipdfex.api respectively. If you installed Adobe first, the installer will copy and rename the .dll files automatically.</p>	1

## Allegro Options

Configure options for Allegro files.

### [ECAD]

Parameter	Description	Default
ALLEGRO_USETRUETYPEFONTS = <0 1>	<p>Set to <b>0</b> to use stroke font.</p> <p>Set to any other integer value to use true type font instead.</p>	0
ECAD_3D_SHOWHOLES = <0 1>	<p>Set to <b>1</b> if you want holes to be drawn in the 3D model.</p> <p>Set to <b>0</b> if you do not want holes to be drawn in the 3D model (increases performance). Currently only affects Allegro files.</p>	0



# AutoCAD Options

Configure options for ACAD files.

## [Options]

Parameter	Description	Default
ACAD_FAST3D = <0 1>	<p>Set to <b>1</b> to improve rendering speed of AutoCAD 3D.</p> <p><b>Note</b> Setting this option to 1 means that layers will not be listed and AutoVue streams all meshes &amp; extrusions in one body.</p> <p>Set to <b>0</b> will mean slower rendering of AutoCAD 3D. However, layer information is listed and each mesh is streamed in its own entity.</p>	1
ACAD2004RGBCOLOR = <0 1>	<p>If <b>1</b>, use RGB color.</p> <p>If <b>0</b>, use AIC (AutoCAD Indexed Color).</p> <p><b>Note</b> Should be set to <b>0</b> to be able to use pen settings for printing.</p> <p><b>Note</b> This is for AutoCAD files, version 2004 and later.</p>	1
ACADDEFAULTFONT = fontname	This font is substituted if an 8-bit font is not located for AutoCAD drawings.	
ACADDEFAULTBIGFONT = bigfontname	This font is substituted if a 16-bit font is not located	
DRAWORDER = <0 1>	<p>If <b>1</b>, draws sorted (ordered) entities from the last save of the DWG file, otherwise, entities are drawn in the order they were first created.</p>	1

Parameter	Description	Default
FIELDDISPLAY = <0 1>	Specify whether or not field backgrounds display. Set to <b>1</b> to display field background. Set to <b>0</b> to hide field background. <b>Note:</b> For AutoCAD 2005 and up.	1
LWDEFAULT = [1-100]	Set the default line weight. Specify a value between <b>1</b> (which corresponds to 0.01mm) and <b>100</b> (which corresponds to 1mm). Default value is <b>25</b> ( which corresponds to 0.25mm).f	25
LWDISPLAYSCALE = [0-100]	This option controls the display scale of line weights in the model space page for AutoCAD files version 14 and above. Set this option to [0-100]. <ul style="list-style-type: none"> <li>For no line weight scaling, set this option to 25.</li> <li>For thicker lines, set this option above 25.</li> <li>For thinner lines, set this option below 25.</li> </ul>	25
SHOWALLLAYERS = <0 1>	If <b>1</b> , turns on all the layers in the base and XRef files.	0

# Autodesk DWF Options

Configure options for DWF files.

## [Options]

Parameter	Description	Default																		
DWFRGBCOLOR = <0 1>	If <b>1</b> , use RGB color. If <b>0</b> , use AIC (AutoVue Indexed Color). <b>Note</b> Should be set to <b>0</b> to be able to use pen settings for printing.	1																		
DWFCOLORTBL	<p>Option is applicable only when <b>DWFRGBCOLOR = 0</b>.</p> <p>Specify the path and the name to a color table. Specified color table overrides the palette stored in the DWF file.</p> <p>If no external palette is specified, the default palette stored in the DWF file will be used.</p> <p>Below are some of the common colors and their corresponding pen numbers:</p> <table><tr><td>0,0,0</td><td>/* 0, Black */</td></tr><tr><td>128,128,128</td><td>/* 248, Gray */</td></tr><tr><td>255,0,0</td><td>/* 190, Red */</td></tr><tr><td>0,255,0</td><td>/* 40 Green */</td></tr><tr><td>255,255,0</td><td>/* 251, Yellow */</td></tr><tr><td>0,0,255</td><td>/* 15, Blue */</td></tr><tr><td>255,0,255</td><td>/* 195, Violet */</td></tr><tr><td>0,255,255</td><td>/* 45, Cyan */</td></tr><tr><td>255,255,255</td><td>/* 225, White */</td></tr></table>	0,0,0	/* 0, Black */	128,128,128	/* 248, Gray */	255,0,0	/* 190, Red */	0,255,0	/* 40 Green */	255,255,0	/* 251, Yellow */	0,0,255	/* 15, Blue */	255,0,255	/* 195, Violet */	0,255,255	/* 45, Cyan */	255,255,255	/* 225, White */	
0,0,0	/* 0, Black */																			
128,128,128	/* 248, Gray */																			
255,0,0	/* 190, Red */																			
0,255,0	/* 40 Green */																			
255,255,0	/* 251, Yellow */																			
0,0,255	/* 15, Blue */																			
255,0,255	/* 195, Violet */																			
0,255,255	/* 45, Cyan */																			
255,255,255	/* 225, White */																			

# Autodesk Inventor Options

Configure options for Autodesk Inventor files.

## [Options]

Parameter	Description	Default
AIBACKGROUND = <0 1>	If <b>1</b> , the Inventor decoder draws the background sheet. Otherwise, the decoder draws the outline only. This option applies to Autodesk Inventor 2D files.	1
AILOADNATIVE2D = <0 1>	If <b>1</b> , forces the 2D Inventor decoder to use native data. Otherwise, the DWF embedded image is used if it exists. If DWF information is not stored in the Inventor 2D file, then native support will be activated automatically. This option applies to Autodesk Inventor 2D files.	1

# Cadence Options

Configure options for Cadence HDL files.

## [ECAD]

Parameter	Description	Default
CADENCE_CONCEPTHDL ONLY = <0 1>	Set to <b>1</b> if you do not want PCB boards displayed.	0
CADENCE_CPMONLY = <0 1>	Set to <b>1</b> if you want only files listed in the CPM file displayed.	1

# Cadkey Options

Configure options for Cadkey files.

## [Options]

Parameter	Description	Default
PRTFONTMAP=fullpath_ to_prtfont.map	Specifies the full path to the Cadkey/PRT font map file. This file maps Cadkey/PRT fonts to TrueType fonts.	The file <b>Prtfont.map</b> in the program directory. (avwin)

# CATIA 4 Options

Configure options for CATIA 4 files.

## [Options]

Parameter	Description	Default
CATIAProjectFile	Specify the full path to the CATIA project file. <b>Note</b> Option applies to CATIA 4 files only.	
LoadCatiaWires = <0 1>	Set to 0 to disable display of 3D wires for CATIA V4 3D files.	1
CatiaDefaultFont	Specify the default CATIA 4 native font to use if a font is not found.	
CATIAFILTERNONROOT = <0 1>	Set to 0 to display non-root entities for CATIA 4 3D.	1
CATIAFILTERNOSHOWS = <0 1>	Set to 0 to display no-show entities for CATIA 4 3D.	1

Parameter	Description	Default
CATIAIgnoreProjectionLayer = <0 1>	When set to <b>1</b> supports projected view visibility through draft view layer settings for CATIA 4 drawings.	0
CATIAProjectFilePath = <file path>	Specify the directory path for the location of project files. If the option is set, it will override the existing INI option CATIAProjectFile. Otherwise if the option is not set or project file(s) cannot be found in the specified directory, the old option (CATIAProjectFile) will be used.	empty

**Note** Mapping for CATIA 4 fonts is specified in file CATIAv4.fontmap located in the **<install directory>\awwin\fonts**. This font map is used to map font name to corresponding font resources so that text strings will be displayed properly with correct characters. A requirement for this font map to work properly is the existence of the CATIA 4 project file.

## CATIA 5 Options

Configure options for CATIA 5 files.

### [Options]

Parameter	Description	Default
Catia5ShowPMI = <0 1>	Set to <b>0</b> to hide PMI entities from display. Set to 1 to display PMI entities.	1
Catia5ShowPMIWithMesh = <0 1>	Specify if you wish to display PMI entities in mesh mode. Catia5ShowPMI should be set to <b>1</b> for this option to take effect.	1

Parameter	Description	Default
Catia5BuildInvisibleCGMBodies = <0 1>	Set to <b>1</b> if you wish to process and display invisible BREP bodies.	0
CATIA5BuildCGMSets = <0 1>	Controls the display of Geometrical sets. Set to <b>1</b> to show geometrical sets structure in the Model Tree.	1

## CGM Options

Configure options for CGM files.

### [Options]

Parameter	Description	Default
CGMNOCLIP = <0 1>	Set to <b>0</b> to enable clipping. Some files may display as empty when the value is 0. Set to <b>1</b> to disable clipping and display the file.	0
SHOWBACKGROUND = <0 1>	If <b>1</b> , the background of CGM files is displayed with color. Set option to <b>0</b> if you have problems printing CGM files that contain large black or dark backgrounds.	1

## Excel Options

Configure options for Excel files.

### [Options]

Parameter	Description	Default
DOCVIEW = <0 1>	If <b>1</b> , displays an Excel file in print preview mode, otherwise, displays as a regular spreadsheet.	0
DOCVIEWSHOWHEADERS = <0 1>	Set to <b>1</b> to display headers when the INI option <b>DOCVIEW = 1</b> .	0
SSHIDESCROLLBARS = <0 1>	Set to <b>1</b> to disable scroll bars for spreadsheet files. Option will work for Excel, Archives and MS Access formats.	0

## Gerber Options

Configure options for Gerber files.

### [Gerber Format]

Parameter	Description	Default
INCREMENTALMODE = <0 1>	Enter <b>1</b> if data is in incremental mode.	0
NUMDECIMALS = <i>num</i>	Enter the number of decimals. Specify a value between 1 and 6.	3
NUMDIGITS = <i>num</i>	Enter the number of digits. Specify a value between 1 and 6.	2



Parameter	Description	Default
TOOLFILEPATH = C:\temp\default.too	Specifies the path to the aperture list file.	<install directory>\aviwin\default.too
TOOLFILETYPE = <0 1 2 3 4 5 6 7>	Specifies the type of aperture list file. <b>0</b> = CSI <b>1</b> = Orcad <b>2</b> = ECAM <b>3</b> = Protel <b>4</b> = Artwork <b>5</b> = Allegro <b>6</b> = Visula <b>7</b> = Autotrax	0
TRAILINGZEROS = <0 1>	Enter <b>1</b> if coordinate data is in trailing zeros format.	0
UNITS = <1 2>	Specifies the unit: <b>1</b> is for inches; <b>2</b> is for mm.	1
TOOL_UNIT	Specify the unit for the tool and aperture file if unit is different from the Gerber file. <b>-1</b> = Unspecified file unit. Aperture file will adopt the same unit as the Gerber file. <b>1</b> = inches <b>2</b> = millimeters <b>12</b> = mils	-1

## HPGL/HPGL2 Options

Configure options for HPGL/HPGL2 files.

### [Options]

Parameter	Description	Default
CODEPAGE = <i>num</i>	Forces text display of a specific language. Specify the codepage to use for hpgl files. E.g.: Set <b>CODEPAGE = 932</b> to display Japanese text in HPGL files.	
HPBACKGROUND = <0 1>	<b>0</b> = Do not draw page background <b>1</b> = draw page (applies to HPGL/HPGL2 files)	0
HPGLCOLORTBL = <i>path/hpglcol.tbl</i>	Specifies the path and filename of the color table file for HPGL/HPGL2 files. The color table file specifies the mapping between a pen number and a color. <b>Note</b> This option is used only if the file does not explicitly specify pen colors with the HPGL PC command.	The file <b>Hpglcol.tbl</b> in the program directory (avwin).

## IGES Options

Configure options for IGES files.

### [Options]

Parameter	Description	Default
IGESLoadDraftFirst = <0 1>	Set to <b>1</b> to display the 2D page first, display of the 3D page as a 2D projection of the 3D model, in IGES files.	0

Parameter	Description	Default
IGESLoadSubFigureDefinitions = <0 1>	Set to <b>1</b> to display sub-figure definitions when sub-figure instances are not found. Option is for IGES 3D files.	0

## JPEG Options

Configure options for JPEG files.

Parameter	Description	Default
JPGQUANTIZE = <0 1>	If <b>1</b> , JPEG images are quantized to 256 colors for quicker display. If <b>0</b> , true colors are used. Option applies to JPEG files.	1

# JPEG 2000 Options

Configure options for JPEG 2000 files.

## [Options]

Parameter	Description	Default
J2KRESOLUTION= [DYNAMIC   HIGH   MEDIUM   LOW   +num   -num ]	<p>Set to <b>HIGH</b> to display with a high resolution. This could cause a decrease in performance.</p> <p>Other values: <b>LOW, MEDIUM, DYNAMIC</b>.</p> <p>You can also set values to <b>+n</b> or <b>-n</b>, where <b>n</b> is a number between <b>1</b> and <b>100</b>.</p> <p>Setting to <b>+num</b> gives the same result as DYNAMIC but increases the resolution by a factor of num where num is a value from 1 to 100 (up to the maximum possible resolution of the image). This could cause a decrease in performance.</p> <p>Setting to <b>-num</b> gives the same result as DYNAMIC but decreases the resolution by a factor of num where num is a value from 1 to 100 (down to the lowest possible resolution of the image). This can increase performance.</p>	DYNAM IC

# ME10/OneSpace Designer Drafting Options

Configure options for ME10/OneSpace Designer Drafting files.

## [Options]

Parameter	Description	Default
ME10CONSTRUCTION GEOM = <0 1>	Set to <b>1</b> to toggle on construction entities for ME10 files.	1
ME10MULTIBYTE = <0 1>	This option sets the priority for glyph search in Multibyte/Singlebyte fonts. <ul style="list-style-type: none"><li>Set this option to <b>0</b> if the file does not contain any Multibyte fonts (Far Eastern Languages).</li><li>Set this option to <b>1</b> if the file contains a mixture of Singlebyte/Multibyte fonts.</li></ul>	0
ME10RGBCOLOR = <0 1>	Determine the mode of colors for ME10 files. If <b>1</b> , use RGB colors. If <b>0</b> , use AIC (AutoVue Indexed Color). <b>Note</b> When set to <b>0</b> , you can customize the file <b>me10col.tbl</b> to get the desired pen settings.	1
ME10SHOWVERTEX = <0 1>	Set to <b>1</b> to toggle on vertices for ME10 files.	0

Parameter	Description	Default
MEFONTMAP = <i>fullpath_to_mefont.map</i>	<p>Specifies the full path to the ME10/OneSpace Designer Drafting font map file. This file maps ME10/OneSpace Designer Drafting fonts to the appropriate native ME10/OneSpace Designer Drafting font files or TrueType fonts. To use native ME10/OneSpace Designer Drafting fonts, you need to provide the appropriate font files. This can be done:</p> <ul style="list-style-type: none"> <li>• By copying them from the native application to the "fonts" folder in AutoVue's program directory.</li> <li>• By specifying the path to them using the INI option XFONTPATH.</li> </ul> <p>These files can be found in the "fonts" folder under the native application's program directory (i.e. <i>fullpath_to_installation_folder\fonts\</i>).</p>	The file <b>mefont.map</b> in the program directory. (avwin)

# MicroStation Drawing Options

Configure options for MicroStation drawings.

## [Options]

Parameter	Description	Default
DGN_FAST3D	Set to <b>1</b> to improve rendering speed of MicroStation 8 files. <b>Note</b> Setting this option to 1 means that layers will not be listed and AutoVue streams all meshes & extrusions in one body. Set to <b>0</b> will mean slower rendering of MicroStation 8 files. However, layer information is listed and each mesh is streamed in its own entity.	1
DGN8LSTYLERSC= <i>fullpath_</i> to_style.rsc	Specify the full path to a MicroStation linestyle resource file that will be used to render linestyles and multi-line patterns.	
DGN8LWDISPLAYSCALE = [0.0-1000.0]	Specify a floating point value, larger or equal to 0.0, representing the scaling factor which would be applied to all lineweights in the drawing. <b>For example:</b> Set to <b>0.0</b> : Reduces all lineweights to 0 (1 pixel width). Set to <b>1. 0</b> : Lineweights remain at their default value. Set to <b>0.5</b> : Reduces all lineweights by half. Set to <b>2. 0</b> : Multiplies all lineweights by 2.	1.0

Parameter	Description	Default
DGN8XREFUNITS	<p>Option applies to MicroStation version 8 files with AutoCAD XREFs.</p> <p>Specify the unit to use for AutoCAD XREFs when units information for the XREFs is not stored in the MicroStation drawing. The unit specified should be the same as the unit for the DWG specified in MicroStation. Consult the MicroStation help for a complete list of units. If the unit is not specified or an invalid value is specified, AutoVue reads the units from the AutoCAD XREF and hence, XREFs may not be scaled properly.</p> <p><b>Example:</b> DGN8XREFUNITS = meters</p>	
DGNARABICFONTS = <0 1>	<p>Support for Arabic fonts for MicroStation.</p> <p>Set to <b>1</b> to specify right-to-left drawing.</p>	
DGNCOLORTBL = <i>fullpath_to_color.tbl</i>	<p>Option applies to MicroStation 7 files.</p> <p>Redirects the full path to a MicroStation DGN color table file. This option is used only if the MicroStation file does not have a color-table element in it. If a color-table element exists in the file, it will supersede this option.</p>	



Parameter	Description	Default
DGNDEACTIVATELEV SYMB = <0 1>	Applies to MicroStation 7 and 8 files. When MicroStation's Settings\View settings\Level Symbology flag is set, all graphic entities are displayed using the level (the one the entity belongs to) settings for color, line style, and line width (the entity's symbology). This option was implemented to overwrite the Settings\View settings\Level Symbology flag and display a file using the individual entity's symbology.	0
DGNFONTMAP = <i>fullpath_</i> todgnfont.map	Specify the full path to a MicroStation DGN font to TrueType mapping file. Note that native MicroStation fonts are supported and that this option is used only when the native fonts are unavailable. <b>Note</b> Applies only to MicroStation 7.	The file <b>dgnfont.map</b> in the program directory.
DGNFONTRSC = <i>fullpath_to_</i> <i>font.rsc;full2. . .</i>	Specify a semi-colon separated list of the full paths to fonts for the MicroStation font RSC files.	
DGNIRASB = <0 1>	If <b>0</b> , MicroStation raster hybrid files follow the I/RAS B conventions for raster extents. Use this option if you find that the raster components of MicroStation files appear stretched.	0

Parameter	Description	Default
DGNLSTYLERSC = <i>fullpath</i> _to_style.rsc	Specify the full path to a MicroStation linestyle resource file that will be used to render linestyles and multi-line patterns. <b>Note</b> Option applies to MicroStation 7 files.	
DGNREFCYCLECHECK = <0 1>	Option applies to MicroStation 8 files and corresponds to MicroStation v8.5 environment variable MS_REF_CYCLECHECK. When set to <b>1</b> , the decoder will check for circular references in reference paths. Circular references will not be displayed, except for the case where a given model references itself. When set to <b>0</b> , all references will be displayed, as long as nesting depth permits.	1
SHOWZEROLENGTHLINES = <0 1>	Option applies to MicroStation 7 files. If <b>1</b> , the MicroStation points (zero length lines) are displayed, otherwise, the points are hidden.	0

# NC-Drill Options

Configure options for NC-Drill files.

[ECAD]

Parameter	Description	Default
NCD_UNITS	Option applies to NC-Drill format. Specify units for NC-Drill files. <b>1</b> = inches <b>2</b> = millimeters	1
NCD_TRAILINGZEROSOMITTED	Option applies to NC-Drill format. <b>0</b> = Coordinate data is trailing zero omitted <b>1</b> = Coordinate data is leading zero omitted <b>2</b> = Coordinate data is all digits present <b>3</b> = Coordinate data is explicit decimal point	0
NCD_COMMENTSYMBOL	Option applies to NC-Drill format. Specify the comment symbol.	;
NCD_INCREMENTALMODE	Option applies to NC-Drill format. Set to 1 if data is in incremental mode. <b>0</b> = absolute mode <b>1</b> = incremental mode	0
NCD_NUMDIGITS	Option applies to NC-Drill format. Specify the number of digits. Specify a value between 0 and 6. Changing this value will affect the x, y coordinate.	2
NCD_NUMDECIMALS	Option applies to NC-Drill format. Specify the number of decimals. Specify a value between 0 and 6. <b>Note</b> Changing this value will affect the x, y coordinate.	4

Parameter	Description	Default
NCD_APERTURE_FORMAT_FILEPATH	Option applies to NC-Drill format. Complete path for Aperture format file. This file provides information on how to read the tool file	empty path
NCD_TOOLFILEPATH	Complete path for Tool file.	empty path

## OrCAD Layout Options

Configure options for OrCAD Layout files.

[ECAD]

Parameter	Description	Default
ORCAD_CUTOUT_COPPER_POUR = <0 1>	Set to <b>1</b> if you wish to display copper pour cutouts for OrCAD Layout files	0

## Pro/ENGINEER Options

Configure options for Pro/ENGINEER files.

[Options]

Parameter	Description	Default
ProE2DLoadSavedDisplayLists = <0 1>	<p>If set to <b>1</b>, the display list will be loaded instead of generating the 2D drawing from the 3D Model.</p> <p>If the display list does not exist, the 2D drawing will be generated from the 3D Model.</p> <p><b>Note</b> Option applies to Pro/ENGINEER 2D files.</p>	1

Parameter	Description	Default
ProE2DLoadPicture = <0 1>	Set to <b>1</b> to load the preview data for Pro/ENGINEER 2D Drawings. If preview does not exist, the 2D drawing will be generated from the 3D Model.	0
ProELang	Specify the native font to use for Pro/ENGINEER 2D drawings. Possible values are: Korean/Japanese/ Chinese_cn/Chinese_tw/ Hebrew/Russian Example: ProELang = Chinese_cn  Font files to use should be defined in the proefont.map file located in the avwin\font subdirectory in the AutoVue installation directory. Refer to proefont.map for more instructions regarding font mapping.	
ProELoadCosmetics = <0 1>	Set to 0 to turn off display for 3D wires, datum planes and datum axes.	1
ProELoadPMIData = <0 1>	Set to <b>0</b> to disable display of PMI entities.	1
ProEMassPropUseMesh = <0 1>	Set to <b>1</b> to compute mass properties (volume, surface area, mass,...) using the mesh model. <b>Default 0</b> , compute mass properties using the BRep model.	0

Parameter	Description	Default
ProEPMIDIMTOLDisplay = <0/1>	Set to <b>1</b> to display tolerance for dimension entities for Pro/ENGINEER 3D files.	1
ProEShowHiddenLineDashed = <0/1>	This option controls the display and printing of hidden lines contained in Pro/ENGINEER drawings. Set to <b>1</b> to display and print hidden lines as dashed lines. Set to <b>0</b> to display and print hidden lines as solid lines.	0
ProE2DTanEdgeDefaultStyle = [0-4]	Specify the default line style for tangent edges if it is not saved in the native file. The possible styles are: <b>0</b> - Solid [Default] <b>1</b> - Disabled <b>2</b> - Control <b>3</b> - Phantom <b>4</b> - Dimmed	0
ProE2DViewDefaultStyle = [HIDDEN   WIREFRAME   SHADING   NO HIDDEN]	Specify a default style to display 3D projected views: <ul style="list-style-type: none"> <li>HIDDEN</li> <li>WIREFRAME</li> <li>SHADING</li> <li>NO HIDDEN (default)</li> </ul>	NO HIDDEN

## SolidWorks Options

Configure options for SolidWorks files.

### [Options]

Parameter	Description	Default
SWSYMBOLFILE	Specifies the path to the symbols file.	

# STEP Options

Configure options for STEP files.

[Options]

Parameter	Description	Default
STEPEdetailedTree = 0/1	Set to <b>1</b> to show detailed tree for STEP files.	0

# Text Options

Configure options for text files.

[Options]

Parameter	Description	Default
CODEPAGE = <i>num</i>	Forces text display of a specific language. Specify the codepage to use for text files. <b>Example:</b> Set <b>CODEPAGE = 932</b> to display Japanese text in text files.	

# Visio Options

Configure options for Visio files.

## [Options]

Parameter	Description	Default
VISIODRAWINGPAGE = <0 1>	Specify if you want to display Visio files in drawing mode or in print mode. Set to <b>1</b> to display in print mode.	0
VISIOPAGE = <0 1>	Displays the page outline and background. <b>0</b> = Off <b>1</b> = On	0
VISIOPAGEBKCOLOR= <i>num</i>	Specify an integer that represents an RGB color (Red + 256 * Green + 65536*Blue). The values for Red, Green, and Blue range from 0 to 255. If set to <b>-1</b> , there will be no background. Only the outline will be displayed if VISIOPAGE is on (=1).	-1

# Word Options

Configure options for Microsoft Word files.

Parameter	Description	Default
DOC_SHOWTABLEGRIDLINES = <0 1>	Turn table grid lines on and off. Set to <b>1</b> to display table grid lines. Set to <b>0</b> to hide table grid lines. <b>Note</b> Unlike cell borders, gridlines never print. This option applies to Word files.	0



# General Options

Configure a variety of general options that apply to parameters such as fonts, performance, color, and a whole lot more.

## [Options]

Parameter	Description	Default
2DSELECTION_DIMLEVEL = [0.0 - 1.0]	Specify the dim level. The value corresponds to a percentage. For example 0.3 is 30%. Change takes effect whether you change it manually or through the GUI.	0.5
3DMASSPROP_MESH_BEHAVIOR = [0 1 2]	Specify how to handle mesh when computing mass properties. This option can have of the following values: <b>0</b> – Exclude from mass property computation. <b>1</b> – Include in mass property computation. <b>2</b> – Handle selection: Include in mass property computation only if the selection is made fully with mesh bodies.	1
3DMASSPROP_SHEET_BEHAVIOR = [0 1 2]	Specify how to handle sheet when computing mass properties. This option can have of the following values: <b>0</b> – Exclude from mass property computation. <b>1</b> – Include in mass property computation. <b>2</b> – Handle selection: Include in mass property computation only if the selection is made fully with sheet bodies.	2

Parameter	Description	Default
AntiAlias = <0 1>	If <b>1</b> , enhances display of monochrome raster images.	1
ArcResolution = <i>num</i>	Indicates the degree increment used in rendering arcs.	10
Contrast = value	Applies contrast to monochrome raster images. The value can range from <b>-0</b> (low contrast) to <b>100</b> (high contrast).	0
CustomFileFilter	Specifies a custom file filter for opening files with AutoVue.	*,*
DecimalDigits	Specify the number of decimals to display when measuring in AutoVue.	4
DefaultDocPageSize	Specify the page size in inches that AutoVue should use in order to properly display text files. <b>Example:</b> DefaultDocPageSize = 11.0,8.5 will force AutoVue to display text files at a page size of 11x8.5 inches. <b>Note</b> This option is only for Text files and Microsoft Outlook Messenger files.	

Parameter	Description	Default
DefaultUnits	Specify default unit for AutoVue. <b>1</b> - inches <b>2</b> - millimeters <b>5</b> - centimeters <b>7</b> - meters <b>8</b> - kilometers <b>9</b> - feet <b>10</b> - yards <b>11</b> - miles <b>12</b> - mils <b>14</b> - microns <b>15</b> - microinches	1
FASTDISPLAY = <0 1>	In 2D files, AutoVue renders the drawing, ignoring some details in order to speedup the rendering. If set to <b>0</b> , AutoVue performs a full rendering without any optimization of the drawing of the primitives. If set to <b>1</b> , AutoVue performs the following optimizations during the rendering of the files: <ul style="list-style-type: none"> <li>• Draw small text as boxes.</li> <li>• Ignore the line-style for small primitives and draw them with plain style.</li> <li>• Ignore the point style for points and draw them in dot style.</li> </ul>	0
FLIP = <0 1 2 3>	Specifies the flipping direction: <b>0</b> = none <b>1</b> = horizontal <b>2</b> = vertical <b>3</b> = both	0

Parameter	Description	Default
FORCETOBLACK = <0 1>	Set to <b>1</b> to force all colors to black when displaying vector documents.	0
FullColorPrinterSupport = <0 1>	<p>Enable color printing for some monochrome images.</p> <p>Set to <b>0</b>: Default AutoVue behavior; where some transparent monochrome images are not printed in color due to some printers that do not fully support transparency.</p> <p>Set to <b>1</b>: Enables certain monochrome images to be printed in color with color printers. This flag should not be set by default because it has some drawbacks and may cause some problems on some printers.</p> <p>Enabling option <b>1</b> could cause a decrease in performance:</p> <ul style="list-style-type: none"> <li>• The spool size is much larger because there is 8 to 24 times more information sent to the printer.</li> <li>• Not all printers fully support image transparency and using them with this option may yield incorrect results.</li> </ul>	0

Parameter	Description	Default
GpsOutText = <0 1>	<p>Set to <b>1</b>: When you run outtext.exe, it only reports the first level of Xrefs in the hierarchy with the fully resolved/qualified path to the Xrefs.</p> <p>Set to <b>0</b>: When you run outtext.exe, all Xref instances are reported and the path to the Xrefs is not fully qualified.</p>	0
INVERT = <0 1>	Set to <b>1</b> to display monochrome raster images display inverted.	0
KEEPPRIGINALCOLORS = <0 1>	<p>Set to <b>1</b> to preserve the original graphic colors, regardless of the background color.</p> <p>Set to <b>0</b> to change the color of graphics to black or white when the original color of the graphics are the same as the background color.</p> <p>Either white or black is chosen depending on which is more visible against the background. For example, yellow graphics on a yellow background change to black, or dark-blue graphics on a dark-blue background change to white.</p>	
NEWCHILD = <0 1>	<p>This option is only used for integrations.</p> <p>If <b>1</b>, new files are opened in their own window when AutoVue has been launched via the command line with a specified filename. Otherwise, the current window is replaced.</p>	0

Parameter	Description	Default
NOACCELERATION = <0 1>	<p>Set to <b>1</b> to disable OpenGL acceleration.</p> <p>We recommend setting this option to <b>1</b> in the following cases:</p> <ul style="list-style-type: none"> <li>• If 3D files display blank, vector files do not display properly, or if markup entities are not completely visible.</li> <li>• If you have a poor graphics card. OpenGL acceleration could slow down performance for big 3D models.</li> </ul>	0
NOLOGO = <0 1>	If <b>1</b> , the initial splash screen is not displayed.	0
NOSYMBOLTTF = <0 1>	Set to <b>1</b> to override the Charset of Symbol fonts. It will be replaced by the default Charset. This option applies to DWF and DWG files only.	0
NOWINARCS = <0 1>	<p>Set to <b>1</b>: AutoVue does not use the Windows GDI functions to draw arcs.</p> <p>Set to <b>0</b>: Windows renders the arcs. This option is used for some HP print drivers that do not properly render arcs and circles.</p>	0
OVERLAY_ROTATE_FLIP = <0 1>	Set to <b>1</b> to automatically rotate/flip overlay files when overlaying files with AutoVue.	0
RASTERFIT = <0 1>	If <b>1</b> , fits the initial display of raster images to the screen. Otherwise, full resolution is shown.	1

Parameter	Description	Default
RASTERMEMLIMIT = <i>n_kbytes</i>	Swaps raster data to disk when the Windows global memory heap falls below <i>n_kbytes</i> .	6000
RASNOFORCETOBLACK = <0 1>	Set to <b>1</b> to disable Force to Black for raster overlays and for raster files. Option is applicable only when <b>FORCETOBLACK = 1</b> .	0
ROTATE = < <i>degrees</i> >	Specifies the degrees of rotation as 0, 90, 180 or 270.	0
SHOWDIMENSION = <0 1>	If <b>1</b> , shows dimension entities. Otherwise, they are not shown.	1
SHOWFILL = <0 1>	If <b>0</b> , displays only the outlines of filled entities (solids, fat polylines etc.). Otherwise, these entities are shown as filled.	1
SHOWHATCHING = <0 1>	If <b>1</b> , the FILLMODE system variable (AutoCad) and the Hatch display are turned off, otherwise, Hatch entities are displayed.	0
SHOWLINESTYLE = <0 1>	If <b>1</b> , shows linestyle patterns If <b>0</b> , linestyles are displayed as solid lines.	1
SHOWLINEWEIGHT	If <b>1</b> , displays varying line thicknesses. If <b>0</b> , displays no line weights for any lines (all lines appear equal).	1
SHOWTEXT = <0 1>	If <b>1</b> , text entities are shown.	1
SHOWTREE	If <b>1</b> , tree is displayed.	1
SHOWXREFS = <0 1>	If <b>1</b> , external reference files are shown.	1

Parameter	Description	Default
STARTINDIR	If <b>1</b> , File Open dialog always defaults to the directory specified in the "start in" option of the AutoVue shortcut. If <b>0</b> , sets File Open dialog to the last open path.	0
TIFF_ZERO_PIXEL = [BLACK   WHITE   FILE]	Specify how pixel values are interpreted in black and white TIFF files. Set to <b>BLACK</b> to force zero pixels to display black. Set to <b>WHITE</b> to force zero pixels to display white. Set to <b>FILE</b> to force zero pixels to display as the pixel color specified in the file. <b>Note</b> This only applies to black and white TIFF images.	FILE
TILEMODE = <-1 0 1>	Specifies: <b>1</b> - model space <b>0</b> - paper space <b>-1</b> - automatic	-1
TRA_NAME	Specify the name of the translation file to use. AutoVue UI will be launched in specified language. Example: TRA_NAME = fr.tra If fr.tra contains French resource files, AutoVue UI will startup in French.	
VECTORFIT = <0 1>	If <b>1</b> , causes Vector files to be "Auto-Fit" once they are loaded.	0
VECTORMEMLIMIT = n_kbytes	Swaps vector data to disk when the Windows global memory heap falls below n_kbytes.	4096



Parameter	Description	Default
VECTORWINDOWSMETA = <0 1>	If <b>1</b> , uses Windows metafiles to store vector display lists, otherwise uses a custom high-performance display list.	0
XFONTPATHS = <i>paths</i>	Specifies a semicolon-delimited list of directories to search for external fonts.	no path
XREFPATHS = <i>paths</i>	Specifies a semicolon-delimited list of directories to search for external references in CAD drawings.	no path

## Base Font Options

The parameters in the following table only apply to text files.

**[BaseFont]**

Parameter	Description	Default
Face	Specifies the font name.	Arial
Size	Specifies the font size.	10
Weight	Specifies the font weight.	400 (Normal)
IsStrikeOut	If <b>1</b> , the text entity has a strikethrough.	0
IsUnderline	If <b>1</b> , the text entity is underlined.	0
IsItalic	If <b>1</b> , the text entity is italicized.	0

# UI Color Options

Configure options to specify background color for different file formats.

**Note** For each color option, specify an integer that represents an RGB color (Red + 256 \* Green + 65536\*Blue). The values for Red, Green, and Blue range from **0** to **255**.

[UI Colors]

Parameter	Description	Default
BKCOLORARCHIVE	Specify background color for archive files.	
BKCOLORCOLORRASTER	Specify background color for raster formats.	
BKCOLORDATABASE	Specify background color for database files.	
BKCOLORDOCUMENT	Specify background color for PDF formats.	
BKCOLOREDA	Specify background color for EDA files.	0
BKCOLORMONORASTER	Specify background color for monochrome raster formats.	
BKCOLORSPREADSHEET	Specify background color for spreadsheets.	
BKCOLORTHUMBNAILS	Specify background color for thumbnails.	
BKCOLORVECTOR	Specify background color for vector formats.	

## 3D Options

The parameters in the following table apply to 3D files.

### [Options]

Parameter	Description	Default
DISPLAYMODE	Specify the default display mode. Display mode values: <b>1</b> - Shaded <b>2</b> - Wire Polygons <b>4</b> - Wireframe <b>8</b> - Hidden Line <b>16</b> - Silhouette <b>32</b> - Shade Wire	1
DYNAMICDISPLAY	Specify render mode for dynamic display.	0
ForcePMIsZOrder = <0 1>	Invalidate the PMI_ATTRIB_RENDERABOV EMODEL generic attribute effect: 3D PMIs are not forced above the model and may be occluded by it, depending on its orientation.	0
LOADFACETEDDATA = <0 1>	Set to <b>1</b> if you wish to read Mesh data for 3D files. Set to 0 if you wish to read BRep data for 3D files.	

Parameter	Description	Default
MESHBUILDTOPOLY = <0 1>	<p>Set to <b>0</b> if you do not want to build the topology in mesh mode. Applies to the following file formats:</p> <ul style="list-style-type: none"> <li>• Catia 5</li> <li>• ProEngineer</li> <li>• SolidWorks</li> <li>• Unigraphics</li> <li>• STL</li> </ul> <p><b>Note</b> This option replaces the following INI options: SWBUILDMESHTOPOLY, Catia5MeshBuildTopology and BUILDMESHTOPOLY.</p>	1
MESHRESOLUTIONDEFAULT = <0 1 2>	<p>Configure default mesh resolution for 3D files:</p> <p><b>0</b> - Medium</p> <p><b>1</b> - Low</p> <p><b>2</b> - High</p>	0
SMOOTHSHADING = <0 1>	If <b>1</b> , smooth shading is turned on.	1
PERSPECTIVE = <0 1>	If <b>1</b> , enables the Perspective view.	0
PMITEXTRENDERINGSTYLE = <0 1 2>	<p>Specify the text rendering style for PMI entities.</p> <p><b>0</b> - Native Setting</p> <p><b>1</b> - 3D</p> <p><b>2</b> - Flat-to-screen</p>	0
SHOWAXES = <0 1>	If <b>1</b> , shows Global Axes.	1

# 3D Color Options

Configure options to specify color for 3D files.

**Note** For each color option, specify an integer that represents an RGB color (Red + 256 \* Green + 65536\*Blue). The values for Red, Green, and Blue range from **0** to **255**.

[Options]

Parameter	Description	Default
BACKGROUNDCOLOR	Specify color for background.	
ENTITYDEFAULTCOLOR	Specify default color for 3D models.	
HIGHLIGHTCOLOR	Specify color for highlighting.	
DISTANCECOLOR	Specify color for distance measurement.	
EDGESCOLOR	Specify color for highlighting edges.	
FACESCOLOR	Specify color for highlighting faces.	
VERTICESCOLOR	Specify color for highlighting vertices.	
SECTIONEDGECOLOR	Specify section edge color.	
MINDISTFIRSTSETCOLOR	Specify color for first set in minimum distance measurement.	
MINDISTSECONDSETCOLOR	Specify color for second set in minimum distance measurement.	

## 3D Measurement Units

### [3D Measurement Units]

Parameter	Description	Default
DisplayMassUnits	Specify display units for mass.  Mass units values: <b>0</b> - Gram (g.) <b>1</b> - Kilogram (kg.) <b>2</b> - Milligram (mg.) <b>3</b> - Pound (lb.) <b>4</b> - Ton (US) <b>5</b> - Ton (UK - imperial system) <b>6</b> - Ounce (oz.) <b>7</b> - Slug	0
DisplayLengthUnits	Specify display units for length.  Distance units values: <b>1</b> - Inch (in.) <b>2</b> - Millimeter (mm.) <b>5</b> - Centimeter (cm.) <b>7</b> - Meter (m.) <b>8</b> - Kilometer (km.) <b>9</b> - Feet (ft.) <b>10</b> - Yard (yd.) <b>11</b> - Mile (mi.) <b>12</b> - Thousandth of an inch (mil) <b>14</b> - Micron <b>15</b> - Microinch	1
DensityMassUnits	Specify density mass units.	0 (Grams)
DensityLengthUnits	Specify density length units.	1 (Inches)
Density	Specify density value	1.0
ApplyDefaultDensity ToAllParts	If <b>1</b> , density is to be applied to all parts.	0

Parameter	Description	Default
MassPropsAccuracy	integer <b>2</b> = high accuracy  Possible values: <b>0</b> = LOW <b>1</b> = MEDIUM <b>2</b> = HIGH <b>3</b> = VERY HIGH	2
InertiaTensorPosition	If <b>1</b> , computes Tensor of Inertia at Center of Gravity. If <b>0</b> , computes Tensor of Inertia at Output Coordinate System Origin.	0

### 3D PMI Options

Configure the following options to control visibility of PMI entities for 3D files.  
[Options]

Parameter	Description	Default
PMI_TREE_COORDINATE SYSTEM	Set to <b>1</b> to display datum coordinate system entities in the tree. Set to <b>0</b> to hide datum coordinate system entities from the tree.	1
PMI_VIEW_COORDINATE SYSTEM	Set to <b>2</b> to set the visibility of datum coordinate system entities to the last saved state in the native application. Set to <b>1</b> to display datum coordinate system entities. Set to <b>0</b> to hide datum coordinate system entities from the display.	2
PMI_TREE_DATUMFEATURE SYMBOL	Set to <b>1</b> to display datum feature symbol entities in the tree. Set to <b>0</b> to hide datum feature symbol entities from the tree.	1

Parameter	Description	Default
PMI_VIEW_DATUMFEATURE SYMBOL	Set to <b>2</b> to set the visibility of datum feature symbol entities to the last saved state in the native application. Set to <b>1</b> to display datum feature symbol entities. Set to <b>0</b> to hide datum feature symbol entities from the display.	2
PMI_TREE_DATUMTARGET	Set to <b>1</b> to display datum target entities in the tree. Set to <b>0</b> to hide datum target entities from the tree.	1
PMI_VIEW_DATUMTARGET	Set to <b>2</b> to set the visibility of datum target entities to the last saved state in the native application. Set to <b>1</b> to display datum target entities. Set to <b>0</b> to hide datum target entities from the display.	2
PMI_TREE_DIMENSION	Set to <b>1</b> to display dimension entities in the tree. Set to <b>0</b> to hide dimension entities from the tree.	1
PMI_VIEW_DIMENSION	Set to <b>2</b> to set the visibility of dimension entities to the last saved state in the native application. Set to <b>1</b> to display dimension entities. Set to <b>0</b> to hide dimension entities from the display.	2
PMI_TREE_FEATURECONTROL FRAME	Set to <b>1</b> to display datum feature control frame entities in the tree. Set to <b>0</b> to hide datum feature control frame entities from the tree.	1



Parameter	Description	Default
PMI_VIEW_FEATURECONTROL FRAME	Set to <b>2</b> to set the visibility of datum feature control frame entities to the last saved state in the native application. Set to <b>1</b> to display datum feature control frame entities. Set to <b>0</b> to hide datum feature control frame entities from the display.	2
PMI_TREE_LINEWELD	Set to <b>1</b> to display lineweld entities in the tree. Set to <b>0</b> to hide lineweld entities from the tree.	1
PMI_VIEW_LINEWELD	Set to <b>2</b> to set the visibility of lineweld entities to the last saved state in the native application. Set to <b>1</b> to display lineweld entities. Set to <b>0</b> to hide lineweld entities from the display.	2
PMI_TREE_LOCATOR	Set to <b>1</b> to display locator entities in the tree. Set to <b>0</b> to hide locator entities from the tree.	1
PMI_VIEW_LOCATOR	Set to <b>2</b> to set the visibility of locator entities to the last saved state in the native application. Set to <b>1</b> to display locator entities. Set to <b>0</b> to hide locator entities from the display.	2
PMI_TREE_MEASUREMENT POINT	Set to <b>1</b> to display point measurement entities in the tree. Set to <b>0</b> to hide point measurement entities from the tree.	1

Parameter	Description	Default
PMI_VIEW_MEASUREMENT POINT	Set to <b>2</b> to set the visibility of point measurement entities to the last saved state in the native application. Set to <b>1</b> to display point measurement entities. Set to <b>0</b> to hide point measurement entities from the display.	2
PMI_TREE_NOTE	Set to <b>1</b> to display note entities in the tree. Set to <b>0</b> to hide note entities from the tree.	1
PMI_VIEW_NOTE	Set to <b>2</b> to set the visibility of note entities to the last saved state in the native application. Set to <b>1</b> to display note entities. Set to <b>0</b> to hide note entities from the display.	2
PMI_TREE_REFERENCE GEOMETRY	Set to <b>1</b> to display reference geometry entities in the tree. Set to <b>0</b> to hide reference geometry entities from the tree.	1
PMI_VIEW_REFERENCE GEOMETRY	Set to <b>2</b> to set the visibility of reference geometry entities to the last saved state in the native application. Set to <b>1</b> to display reference geometry entities. Set to <b>0</b> to hide reference geometry entities from the display.	2
PMI_TREE_SPOTWELD	Set to <b>1</b> to display spotweld entities in the tree. Set to <b>0</b> to hide spotweld entities from the tree.	

Parameter	Description	Default
PMI_VIEW_SPOTWELD	Set to <b>2</b> to set the visibility of spotweld entities to the last saved state in the native application. Set to <b>1</b> to display spotweld entities. Set to <b>0</b> to hide spotweld entities from the display.	2
PMI_TREE_SURFACEFINISH	Set to <b>1</b> to display surface finish entities in the tree. Set to <b>0</b> to hide surface finish entities from the tree.	1
PMI_VIEW_SURFACEFINISH	Set to <b>2</b> to set the visibility of surface finish entities to the last saved state in the native application. Set to <b>1</b> to display surface finish entities. Set to <b>0</b> to hide surface finish entities from the display.	2
PMI_TREE_WIRE	Set to <b>1</b> to display wire entities in the tree. Set to <b>0</b> to hide wire entities from the tree.	1
PMI_VIEW_WIRE	Set to <b>2</b> to set the visibility of wire entities to the last saved state in the native application. Set to <b>1</b> to display wire entities. Set to <b>0</b> to hide wire entities from the display.	2

# EDA Options

Configure a variety of EDA options that apply to parameters for selections, Snap Box, Color.

## [ECAD]

Parameter	Description	Default
ECAD_3D_BOARDCOLOR	Specify the color of the PCB board in 3D.	25600
ECAD_3D_COMPONENTCOLOR	Specifies the color of the PCB components in 3D.	2631720
ECAD_3D_DEFAULTBOARD THICKNESS = [0-1000]	Specifies the board thickness (in mils) for EDA 3D models. <b>Note</b> Value cannot represent a thickness greater than 1 foot.	40 (mils)
ECAD_3D_DEFAULTCOMPONENT THICKNESS = [0-1000]	Specifies the component thickness (in mils) for EDA 3D models. <b>Note</b> Value cannot represent a thickness greater than 1 foot.	40 (mils)
ECAD_3D_DEFAULTHIGHLIGHTSELECTION = <0 1>	Select either Highlight Selected or Dim Unselected as the default behavior when selecting entities. Set to <b>1</b> when Dim Unselected is selected. Set to <b>0</b> when Highlight Selected is selected. Option takes effect whether you change it manually or through the GUI.	0

ECAD_3D_DEFAULTTHICKNESS UNIT	Specify display units for thickness. Thickness units values: <b>1</b> - Inch (in.) <b>2</b> - Millimeter (mm.) <b>5</b> - Centimeter (cm.) <b>7</b> - Meter (m.) <b>8</b> - Kilometer (km.) <b>9</b> - Feet (ft.) <b>10</b> - Yard (yd.) <b>11</b> - Mile (mi.) <b>12</b> -Thousandth of an inch (mil) <b>14</b> - Micron <b>15</b> - Microinch	12
ECAD_3D_DEFAULTMESURE SNAPRADIUS	Specify snap radius for snap box to appear to select entity. <b>Note</b> The snap radius is configured in pixels.	5
ECAD_CROSSPROBE_AUTOMATIC = <0 1>	Specifies whether the Automatic option is enabled or disabled when cross probing EDA files. Set to <b>1</b> to enable Automatic mode during an EDA cross probe. Set to <b>0</b> to disable Automatic mode during an EDA cross probe.	1
ECAD_CROSSPROBE_ZOOM = <0 1 2>	Specify entity selection behavior when crossprobing EDA files. This option can have one of the following values: <b>0</b> - Keep zoom level <b>1</b> - Zoom selected <b>2</b> - Zoom Fit	1

ECAD_LAYER_EXPANDCOLLAPSE_PHYSICAL = <0 1>	Expand or collapse the Physical Layers pane in the Layers dialog. Set to <b>0</b> to expand the Physical Layers pane. Set to <b>1</b> to collapse the Physical Layers pane.	0
ECAD_LAYER_EXPANDCOLLAPSE_LOGICAL = <0 1>	Expand or collapse the Logical Layers pane in the Layers dialog. Set to <b>0</b> to expand the Logical Layers pane. Set to <b>1</b> to collapse the Logical Layers pane.	1
EDASCHSCOPE = <0 1>	EDA entity searching scope. Set to <b>1</b> : the search scope is the entire design. Set to <b>0</b> : the search scope is current page.	0

## Markups

Configure a variety of Markup options that apply to parameters for the **Markup Information** dialog, the Markup file directory, the symbol directory and more.

## Markup Options

The parameters in the following table can be configured for Markups.

### [Markup Options]

Parameter	Description	Default
ARROW_SIZE	Set to a positive value (greater than 0.1) to create zoomable arrow heads when creating leader and measurement markup entities. If set to a negative value, arrow head is not zoomable.	between -7.2 and 0

Parameter	Description	Default
CHILDNORESIZE	Set to <b>1</b> if you want to make sure that a child markup entity is not resized when its parent is resized	0
CONSOLIDATE_OPEN ASACTIVE = <0 1>	Set to <b>1</b> to toggle-on “Open as Active Markup” option in Markup Consolidation dialog. Set to <b>0</b> to turn off this option.	1
DEF_COLOR	Specify a Windows RGB color for default markup entity color. Other values: <b>-1</b> - Assign layer color to markup entity. <b>-2</b> - Hide markup entity. <b>-3</b> - Assign line color (option applies to fill color only).	-1 (by layer)
DEF_LSTYLE	Specify the default linestyle for markup entities. Possible values are: <b>0</b> - Solid line <b>1</b> - Dashed line <b>2</b> - Dashed line (smaller dashes) <b>3</b> - Dash Dot <b>6</b> - Cloud linestyle <b>7</b> - Triangle linestyle	0
DEF_LWIDTH	Specify the default line width in pixels for markup entities.	1
DEF_FILLTYPE	Specify the fill type for filled entities. Possible values are: <b>0</b> - No Fill <b>1</b> - Solid Fill <b>2</b> - Transparent Fill	0

Parameter	Description	Default
DEF_FILLCOLOR	Specify a windows RGB color for default fill color. Other values: <b>-1</b> - Assign layer color to markup entity <b>-2</b> - Hide markup entity <b>-3</b> - Assign line color (option applies to fill color only)	-1
FACTOR_EXTENSION = factor	Files with the indicated extension use the specified calibration factor when measuring distances in Markup mode.	1.0 <b>Example:</b> FACTOR_TIF = 0.5
INFO_USER = <i>title</i>	Specifies the title of the first field in the <b>Markup Information</b> dialog.	User Name
INFO_DEPT = <i>title</i>	Specifies the title of the second field in the <b>Markup Information</b> dialog.	Department
INFO_COMP = <i>title</i>	Specifies the title of the third field in the <b>Markup Information</b> dialog.	Company
INFO_LOC = <i>title</i>	Specifies the title of the fourth field in the <b>Markup Information</b> dialog.	Location
INFO_TEL = <i>title</i>	Specifies the title of the fifth field in the <b>Markup Information</b> dialog.	Tel#
LINETHICKNESS_ ZOOMABLE	Set to <b>1</b> if you want markup entity line thickness to scale according to zoom level.	0
LINESTYLE_ ZOOMABLE	Set to <b>1</b> if you want to maintain markup entity line style at all zoom levels.	0



Parameter	Description	Default
REDAUTOPATH = <0 1>	If <b>0</b> , the markup will be saved to the directory specified in USERREDLINEPATH. If <b>1</b> , markups are saved in the <b>avred</b> sub-directory under the current directory.	1
REDLINEPATH = <i>directory</i>	Specifies the directory to use for Markup files.	The directory <b>avred</b> under the current directory
RESCALEMARKUP = 1	If view extents of base document have changed since creating the Markup, set this option to 1 to scale Markups appropriately.	0
SIGNOFFFILE = <i>path_to_signoffbg</i>	Specify the full name and path for the background image for the Sign Off markup entity.	<b>signoffstamp.bmp</b> in the AutoVue installation directory
SYMBOLPATH = <i>directory</i>	Specifies the directory to use for symbol files.	
TRUECOLOR = <0 1>	If <b>0</b> , the Markup entity color is inverted when it matches the background color. If <b>1</b> , all entities are drawn with their actual color irrespective of the background color. Entities whose color matches or is close to the background color become invisible.	1
USERREDLINEPATH = directory	When specified, this directory takes precedence over the directory specified in REDLINEPATH for the Markup files.	
USERSYMBOLPATH = directory	When specified this directory takes precedence over the directory specified in SYMBOLPATH for the symbol files.	

[Options]

Parameter	Description	Default
EnableOldMarkupOpen = 1	Set to <b>1</b> if you want the Markup Open dialog to appear every time you enter Markup mode.	0

# Calibrate

Specify 2D mode measurement units.

[Calibrate]

Parameter	Description	Default
DistanceUnits	Specifies the default units for 2D Markup mode measurements. Distance units values: 0 - Pixels 1 - Inches 2 - Millimeters 4 - Twips 5 - Centimeters 7 - Meters 8 - Kilometers 9 - Feet 10 - Yards 11 - Miles 12 - Thousandth of an inch (mils) 13 - Ten Thousandth of an inch (mils/10) 14 - Microns 15 - Microinches	1
AreaUnits	Specifies the default units for 2D Markup mode area measurements. Area units values: 0 - Pixels sq. 1 - Inches sq. 2 - Millimeters sq. 4 - Twips sq. 5 - Centimeters sq. 7 - Meters sq. 8 - Kilometers sq. 9 - Feet sq. 10 - Yards sq. 11 - Miles sq. 12 - Thousandth of an inch (mils sq.) 13 - Ten Thousandth of an inch (mils sq./100) 14 - Microns sq. 15 - Microinches sq.	1

## Markup Font Options

[MrkFont]

Parameter	Description	Default
Face	Specifies the text entity font name.	Arial
Size	Specifies the text entity font size.	10
IsBold	If <b>1</b> , the text entity font appears in bold.	0
IsStrikeOut	If <b>1</b> , the text entity contains a strikethrough.	0
IsUnderLine	If <b>1</b> , the text entity is underlined.	0
IsItalic	If <b>1</b> , the text entity appears in italic.	0

## Applications Options

Configure Applications options that apply to application associations.

[Applications]

Parameter	Description
NUMBER = <i>n</i>	Specifies the number of associations that can be defined by the INI option APPLICATION (see following option).
APPLICATION<nnn> = <[ <i>extension</i> ] [ <i>description</i> ]][ <i>command</i> ]>	Specify an association between an active file and a related application. Any number of associations can be specified with nnn. Use INI option NUMBER (see previous option) to define the number of associations files can use. <b>Default:</b> No associations. Extension refers to the current active file. <b>Example:</b> APPLICATION001 = [.dwg][Start Acad][c:\ACAD\acad.exe]

## Compare Options

Configure Compare mode result display.

### [Compare]

Parameter	Description	Default
ViewAdditions	If 1, displays additions.	1
ViewDeletions	If 1, displays deletions.	1
ViewUnchanged	If 1, displays unchanged.	0

## Overlay Options

Configure Overlay options that apply to laying files over the current active document.

### [Overlay Options]

Parameter	Description	Default
Auto	Automatic overlay. Files with the same name as the base file and the given extensions will be considered for automatic overlay when set to <b>1</b> .	1 for raster files (tiff, cit, etc.); 0 for all other
OneToOne	When set to <b>1</b> , avoids scaling and offsetting the overlay file.	0
OverlayText	Specify the list of extensions supported for Auto overlay. <b>Example:</b> OverlayText = drw,dwg,dxf,dgn	drw,dwg,dxf

## Page Size Options in Inches

Configure the parameters for the page size in inches.

**[PAGESIZEINCH]**

Parameter	Description	Default
A = WidthXHeight		8.5 x 11.0
B = WidthXHeight	E.g., To set the Imperial page size to be 11.0" x 17.0", add the following section to the end of the configuration file named <b>avwin.ini</b> : <b>[PageSizeInch]</b> B = 11 x 17	11.0 x 17.0
C = WidthXHeight		17.0 x 22.0
D = WidthXHeight		22.0 x 34.0
E = WidthXHeight		34.0 x 44.0

## Page Size Options in Millimeters

Configure the parameters for the page size in milimeters.

**[PAGESIZEMM]**

Parameter	Description	Default
A4 = WidthXHeight		285 x 198
A3 = WidthXHeight	E.g., To set the metric page size to be 396 mm x 273 mm, add the following section to the end of the configuration file named <b>avwin.ini</b> : <b>[PageSizeMM]</b> A1 = 396X273	396 x 273
A2 = WidthXHeight		570 x 396
A1 = WidthXHeight		817 x 570
A0 = WidthXHeight		165 x 817

# 3D Export Options

Configure the parameters in the following table for 3D export options

[Export Options]

Parameter	Description	Description
EXPORTREGION	Possible entries for bmp and tiff: “EXTENTS”, “DISPLAY”. Possible entries for STL: “SELECTED”, “ALL”.	EXTENTS for bmp and tiff. ALL for STL
EXPORTTO	STL, BMP, and TIFF	STL

# 2D Output Options

Configure the output options that apply to parameters for 2D file conversion, color correction, page size, and many more.

[Output Options]

Parameter	Description	Default
CONVERTTO =	PCRS_TIF is the default format.	
Parameter	Description	Default
PCRS_TIF	TIFF: This is the default format.	
PCRS_BMP	Windows Bitmap	
PCRS_GP4	CALS GP4	
PCRS_EPS	Encapsulated Postscript (Raster)	
PCRS_PCL	HP Laserjet Printer (PCL)	
PCRS_PCX	PCX Bitmap	
PCRS_RLC	Run Length RLC File	

CONVERTTOSUB =	Subformat	Format
0	Uncompressed	PCRS_TIF
CONVERTTOSUB =	Subformat	Format
1	PackBits	PCRS_TIF
2	Fax III	PCRS_TIF
3	Fax IV	PCRS_TIF
0	75 dpi	PCRS_PCL
1	150 dpi	PCRS_PCL
2	300 dpi	PCRS_PCL

**[Options]**

Parameter	Description	Default
COLORDEPTH = <original\ number>	Set the number of bits for the image plane.	ORIGINAL
CONVERTAREA = <DISPLAY EXTENTS>	Indicates the portion of the drawing to be converted. If <b>CONVERTAREA = EXTENTS</b> , the file extents are printed. If <b>DISPLAY</b> is specified, the area given by the DISPLAY option is used. If the <b>DISPLAY</b> option is not set, the extents are printed.	DISPLAY
OUTPUTPAGESIZE = <A B C D E A4 A3 A2 A1 A0 U MAX1 MAX2>	Specifies the current page size.	A
DEFAULTHEIGHT = <i>height</i>	Specifies the default height (in pixels) used when converting from vector to raster formats.	480



DEFAULTWIDTH = <i>width</i>	Specifies the default width (in pixels) used when converting from vector to raster formats.	640
FLIPPING = <NONE VERTICAL HORIZONTAL BOTH>	Specifies the flipping direction(s).	NONE
HEIGHT = <i>height</i>	Specify the height in pixels.	0 (in pixels)
INPUTFILE = <i>fname</i>	Specifies the name and path of the input file.	No default
LAYER< <i>index</i> > = <0 1>	For drawings containing layers, only the layers which are equal to 1 are converted. <b>Example:</b> LAYER1 = 0	1 for all layers
NCOLORS = <i>num</i>	This specifies the number of colors to generate in the output image. The string <b>True Color</b> is used to generate true color images. If the converter does not support the number specified, the closest supported number is used.	The highest number of colors supported for the target format.
NUMLAYERS = <i>num</i>	Specifies the number of layers that exist.	
ORIGIN = <i>unitsX;unitsY</i>	Both X and Y are given in the current UNITS. This specifies the X and Y offset.	X=0 and Y=0
OUTPUTFILE = <i>fname</i>	Specifies the output file name.	No default
OVERLAY< <i>index</i> > = [ <i>filename</i> ][ <i>offsetx</i> , <i>offsety</i> , <i>offsetz</i> ] [ <i>basex</i> , <i>basesy</i> , <i>basesz</i> ] [ <i>scalex</i> , <i>scaley</i> , <i>scalez</i> ] [ <i>dpix</i> , <i>dpiy</i> , <i>dpiz</i> ]	Specify a file to overlay. Any number of overlay files can be specified by making multiple entries with different indexes.	No default

OVERRIDETHICKLINES = <0 1>	Set to <b>1</b> , AutoVue will print as per pen settings. Set to <b>0</b> , AutoVue applies pen settings only to thin lines. Thick lines print with their original thickness. <b>Note</b> Option only applies if pen settings are defined.	1
PAGES = <0 1 2>	Specifies which page(s) to convert for a multi-page input file. Pages are numbered starting at 1. <b>0</b> = All pages <b>1</b> = Page range <b>2</b> = Current page	1
REDLINEFILE = <i>filename</i>	Specifies a Markup file to overlay.	No default
ROTATION = <0 90 180 270>	Specifies the angle (in degrees) that the drawing is rotated.	0
SCALING = <FIT FACTOR>	Indicates the scaling factor for a drawing.	FIT
SCALINGFACTOR = X;Y	This indicates the scaling factor by specifying that X input units must correspond to Y output units.	X=1 and Y=1
SKIPMODE = <AUTO AND OR SKIP>	Specifies how to delete raster lines when an image's size is reduced. <b>SKIP</b> : suitable for color images. <b>AND</b> : for monochrome images with a light background. <b>OR</b> : for images with a dark background. <b>AUTO</b> : causes AutoVue to determine the best mode based on the image's characteristics.	SKIP
TILESIZE X	Specifies the number of pixels in tile X.	96
TILESIZE Y	Specifies the number of pixels in tile Y.	96

TRUEEXTENTS = <i>X0,Y0;X1,Y1</i>	Specifies the true extents of the input file. Used by the conversion when <b>CONVERTAREA = EXTENTS</b> . If not specified, the conversion evaluates the true extents.	No default
UNITS = <PIXEL INCH MM>	Specifies the units to be used when printing or converting a file.	PIXEL
WIDTH = <i>width</i>	Specify the the width in pixels.	0
XResolution YResolution	Specify the resolution of the output device - in this case the output bitmap. They are used when we have thick lines and we need to compute the output line thickness in pixels so it will match the desired line thickness when the bitmap is shown/printed in this resolution. These options will not affect files with no thickness.	Screen resolution is used if no value is specified

**[PCRS\_BMP]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	72

**[PCRS\_EPS]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	720

**[PCRS\_PLC-1]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	75

**[PCRS\_PLC-2]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	150

**[PCRS\_PLC-3]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	300

**[PCRS\_PCX]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	300

**[PCRS\_RLC]**

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	200

[PCRS\_TIF]

Parameter	Description	Default
STEPSPERINCHX = <i>num</i> STEPSPERINCHY = <i>num</i>	Specifies the conversion factor between device units and inches.	200
PREVIEW = <0 1>	Specifies if a preview image should be generated. If <b>PREVIEW = 1</b> , then a 128x128 preview image is generated as the first page of the destination file.	1
TILING = <0 1>	If <b>1</b> , tiles the image; otherwise stripes the image.	1
NSTRIPS = <0 1>	If <b>1</b> , defines the number of stripes for an image.	1
TILESIZEX = <i>num</i>	Specifies the number of pixels in tile X.	
TILESIZEY = <i>num</i>	Specifies the number of pixels in tile Y.	

Pen Mapping Options

Configure the pen mapping options that apply to pen color, thickness and speed.

[Pen Mapping]

Parameter	Description
PENS_starting_pen_number- ending_pen_number = [color, thickness, speed]	Specifies the numerical index for the pen color, thickness (in inches) and speed (in inches per second). The starting pen number must be a multiple of 8; the ending pen number must equal the starting pen number plus 7.  <b>Example:</b> PENS16-23 = [16, 0.0100, 36] [17, 0.0100, 36] [18, 0.0100, 36] [19, 0.0100, 36] [20, 0.0100, 36] [21, 0.0100, 36] [22, 0.0100, 36] [23, 0.0100, 36]

## Disable Options

Configure the Disable options parameters to disable options such as **Browse**, **Next**, or being able to change print settings.

### [Disable]

Parameter	Description	Default
BatchPrint = <0 1>	If <b>1</b> , disables batch printing.	0
Browse = <0 1>	If <b>1</b> , disables the <b>File</b> menu's <b>Browse</b> , <b>Next</b> , and <b>Previous</b> options.	0
Launch = <0 1>	If <b>1</b> , disables the <b>File</b> menu's <b>Launch</b> option.	0
Markup = <0 1>	If <b>1</b> , disables Markup mode.	0
Mail = <0 1>	If <b>1</b> , disables the <b>Mail</b> option in View mode's <b>File</b> menu. If <b>1</b> , also disables the <b>Notify</b> option found in the <b>Save</b> and <b>Save As</b> dialog as in Markup mode.	0
Print = <0 1>	If <b>1</b> , disables printing.	0
PrintSettings = <0 1>	If <b>1</b> , disables changing listed print settings - margins, watermark, headers/footers, pen settings and stamps.	0
PrintToFile = <0 1>	If <b>1</b> ,disables option to print to file.	0
PrintMargins = <0 1>	If <b>1</b> , disables changing Print-Margins.	0
PrintHeadersFooters = <0 1>	If <b>1</b> , disables changing Print Headers and Footers.	0
PrintWatermarks = <0 1>	If <b>1</b> , disables changing the Print-Watermark.	0
PrintStamps = <0 1>	If <b>1</b> , disables changing the Print-Stamps.	0

Parameter	Description	Default
PrintPenSettings = <0 1>	If <b>1</b> , disables changing the Print-Pen settings.	0
MarkupForceToBlack = <0 1>	If <b>1</b> , disables printing Markups in black when the print option AvPrintOptions <b>ForceToBlack</b> is set to 1.	1
Thumbnails = <0 1>	If <b>1</b> , disables the creation of Thumbnails.	0
Convert = <0 1>	If <b>1</b> , disables converting.	0
Clipboard = <0 1>	If <b>1</b> , disables copying to the clipboard.	0
SystemTray = <0 1>	If <b>1</b> , disables the AutoVue system tray icon.	0

## OEM Options

Configure the OEM options parameters to customize the title of the product.

### [OEM]

Parameter	Description	Default
PRODUCT = <Name>	Name of product to appear on title bar.	AutoVue
NICKNAME = <Name>	Short name of product to appear on title bar.	avwin
LONGNAME = <Name>	Long name of product to appear on title bar.	AutoVue, Desktop Edition
VERSION = <Version>	Version number of product to appear in the <b>Help</b> menu's <b>About</b> dialog.	19.2
COPYRIGHT = <Name>	Copyright notice to appear in the Help menu's <b>About</b> dialog.	© Cimmetry 2003-2007

## Thumbnail Options

### [ThumbNails]

Parameter	Description	Default
ImageSize	Specify the size of the thumbnails image.	64 (64 x 64 pixels)
Spacing = <i>num</i>	Specify the spacing between thumbnails. Value should be between 2 and 20 pixels.	10
Details = <0 1 2>	Specify the details of file display. <b>0</b> = None <b>1</b> = Partial <b>2</b> = Full	1
FOLDERPATH	Specify the folder where the thumbnails info is stored.	



Parameter	Description	Default
FOLDERCONFIG	Specify the name of the configuration file for the thumbnail database.	folders.cfg

## Printing Options

### Watermark

Set the Watermark parameters used to define how watermarks print on your documents.

#### [AvPrintWatermark]

Parameter	Description	Default
Facename = <i>font</i>	Specify the font for the printed watermark text.	
Layout = 0	Specify WaterMark Orientation: <b>0</b> - Diagonal <b>1</b> - Horizontal <b>2</b> - Vertical	
LogFont = - 21,0,0,0,400,0,0,0,3,2,1,34	Specify the font size, height, style as per the windows logfont structure.	
Text = <i>watermark_text</i>	Specifies the text to be printed as a watermark. Carriage returns are indicated by \n.	
TextColor = 192,192,192	Specifies WaterMark text color.	

## Stamp

Each stamp parameter is defined by a number according to the following options. Set the Stamp parameters used to define how a stamp will print with your documents.

### [AvPrintStamp]

Parameter	Description	Default
NumberOfStamp = <i>total_number_of_stamps</i>	Specifies the total number of defined stamps.	0
Stamp_entry_Unit_ <i>n</i> = <0 1>	Specifies the units used to position stamps. If <b>1</b> , millimeters, otherwise, inches. The <b>n</b> represents which stamp is being configured.	0
Stamp_entry_Posx_ <i>n</i>	Indicates the position of <b>X</b> in the upper left corner of the stamp file. The <b>n</b> represents which stamp is being configured.	
Stamp_entry_Posy_ <i>n</i>	Indicates the position of <b>Y</b> in the upper left corner of the stamp file. The <b>n</b> represents which stamp is being configured.	
Stamp_entry_Sizex_ <i>n</i>	Specifies the width of the stamp image. The <b>n</b> represents which stamp is being configured.	
Stamp_entry_Sizey_ <i>n</i>	Specifies the height of the stamp image. The <b>n</b> represents which stamp is being configured.	
Stamp_entry_Filename_ <i>n</i> = fname	Specifies the name and path of the file printed as a stamp.	

## General Print Options

Set the parameters that define various aspects of how your documents print, including pen and pixel thickness, printing notes and orientation.

### [AvPrintOptions]

Parameter	Description	Default
AdjustResolution = <0 1>	If <b>1</b> , scales the line pixel thickness by the ratio of the printer dpi to the screen dpi. This option produces the same line thickness as when printing with MicroStation.	1
Area = <0 1 2 3>	Specify page area to print: <b>0</b> - print file extents <b>1</b> - print displayed area <b>2</b> - print limits (only for AutoCAD files) <b>3</b> - print selected area	0
AutoOrientation = <0 1>	If <b>1</b> , Office format document pages are landscape oriented if the page width is greater than the page length.	1
Factor1 = <i>num</i>	When the INI option <b>Scaling</b> = <b>1</b> , Factor1 specifies the number of pixels for the scaling factor.	
Factor2 = <i>num</i>	When the INI option <b>Scaling</b> = <b>1</b> , Factor2 specifies the number of units to which the specified number of pixels are scaled.	
ForceToBlack = <0 1>	If <b>1</b> , the file is printed in black and white. If <b>0</b> , in color.	0
FromPage = <i>num</i>	Indicates the starting page number of the print range.	
OneNotePerPage = <0 1>	If <b>1</b> , one note per page is printed.	0
Orientation = <1 2>	If <b>1</b> , the file is printed as portrait. If <b>2</b> , landscape.	1

Parameter	Description	Default
OverrideThickLines = <0 1>	Setting this option to <b>1</b> applies the pen-thickness settings when printing files of formats such as DGN and HPGL.	0
Pages = <i>total_num</i>	Indicates whether to print all the pages in a document, the current page, or a range of pages. <b>0</b> = All <b>1</b> = Current <b>2</b> = Range	0
PaperFormname = <i>dmFormname</i>	Specifies the name of the form of paper to use, such as "Letter" or "Legal". Retrieve the list of possible values for a particular printer from the print dialog.	
PaperSize = <i>dmPaperSize</i>	Refer to PRINT-OPTION PAPERSIZE on page 100.	
PenThicknessFname = <i>fname</i>	Specifies the name of the file that contains the pen map parameters.	empty
PenThicknessUnits = <0 1>	<b>0</b> = inches <b>1</b> = mms	0
PrinterName = <i>PrintName</i>	Name of the Printer device	
PrintNotes = <0 1>	If <b>1</b> , notes are printed.	0
PrintOnly1stPrPg = <0 1>	If <b>1</b> , limits output to one printer page when the scaling options selected causes a single page to span over several pages.	0
PrintToFile	If <b>1</b> , prints to file.	0
Scaling = <0 1 2>	Specifies the scaling factor: <b>0</b> = fit <b>1</b> = scaling factor <b>2</b> = scaling percentage	0

Parameter	Description	Default
ScalingFactor = <i>percentage</i>	When the INI option <b>Scaling = 2</b> , ScalingFactor specifies the percentage to which the image is scaled.	
SSNoPrintRowHeader = <0 1>	If <b>1</b> , row headers are not printed for spreadsheet formats.	0
SSNoPrintColHeader = <0 1>	If <b>1</b> , column headers are not printed for spreadsheet formats.	0
ThicknessScale = <i>original_thickness1 = print_thickness1,... original_thicknessN = print_thicknessN</i>	<p>Option only applies to MicroStation files.</p> <p>Specify the mapping of MicroStation line weights to line thickness on paper. The option should be set the same as in MicroStation.</p> <p><b>Example:</b>            ThicknessScale = 0.250, 0.375, 0.500, 0.625, 0.750, 0.875, 1.000, 1.125, 1.250, 1.375, 1.500, 1.625, 1.750, 1.875, 2.000, 2.125, 2.250, 2.375, 2.500, 2.625, 2.750, 2.875, 3.000, 3.125, 3.250, 3.375, 3.500, 3.625, 3.750, 3.875, 4.000, 4.125</p>	
THICKNESSSCALEUNIT = <mm inch dot>	Specify the unit to use for the thickness scale. Option only applies to MicroStation files when ThicknessScale is set.	
ToPage = <i>num</i>	Indicates the ending page number of the print range.	
Units = <0 1 2>	<p>Specifies the scaling factor units:</p> <p><b>0</b> = pixels  <b>1</b> = inches  <b>2</b> = millimeters</p>	1
WaterMarkOnTop = <0 1>	If <b>1</b> , prints the watermark on top of the drawing.	0

## Headers and Footers

Set the parameters for document headers and footers used to define how headers/footers print on your documents.

### [AvPrintHeadersFooters]

Parameter	Description	Default
Facename = <i>font</i>	Specifies the font used for the printed headers and footers.	
LeftHeader = <i>text</i>	Specifies the text for the left header.	
CenterHeader = <i>text</i>	Specifies the text for the center header.	Full path of the current document
RightHeader = <i>text</i>	Specifies the text for the right header.	
LeftFooter = <i>text</i>	Specifies the text for the left footer.	
CenterFooter = <i>text</i>	Specifies the text for the center footer.	
RightFooter = <i>text</i>	Specifies the text for the right footer.	Page X (current page number) of Y (total number of document pages)

## Printing Batch Pages

Set the parameters for printing specific pages for file formats defined by AutoVue.

### [BatchPrintPages]

Parameter	Description	Default
FORMAT1 = pagerange	Specify the format and the range of pages to print. Note that the format should be the same as identified by AutoVue. <b>Example:</b> Microsoft Excel 95 = 8-10	1

# Margins

Set the Margin parameters used to define how margins print on your documents.

[AvPrintMargins]

Parameter	Description	Default
Units	Specify the units: <b>0</b> - inches <b>1</b> - millimeters	0
Left	Left margin.	0.25
Top	Top margin.	0.25
Right	Right margin.	0.25
Bottom	Bottom margin.	0.25
IgnoreMin	Ignore printer minimum margins. If <b>1</b> , the printer minimum margins are merged into the page margins specified by the user. e.g if printer min. margin is 0.25in and the margin set by the user is 1inch, the printout will be 1inch from the edge of the page if the option is true and 1.25 inches if it is false.	0

# Notes

Set the Note parameters used to define how notes print on your documents.

[AvPrintNotes]

Parameter	Description	Default
Units	Specify the units: <b>0</b> - inches <b>1</b> - millimeters	0
Left	Left margin.	0.25
Top	Top margin	0.25
Right	Right margin.	0.25

Parameter	Description	Default
Bottom	Bottom margin.	0.25
OneNotePerPage	If <b>1</b> , one note per page is printed.	0

## Markup Measurement Options

It is possible to configure default units and the default symbol for measurements with AutoVue. Configure below options in **avwin.ini**.

### Area Measurements

Configure default symbol and list of symbols for 2D/EDA Area measurements.

#### [UDE\_AREA]

Parameter	Description	Default
DefaultSymbolArea	Specify the default symbol (in unicode) for 2D Markup mode area measurements.	
SymbolList = <i>alphanum</i>	Specifies a comma-separated list of symbols (in unicode) for area measurements. <b>Example:</b> u0398, u2221, u2248.	



## Arc Measurements

Configure default symbol and list of symbols for 2D/EDA/3D arc measurements.

[UDE\_ARCD]

Parameter	Description	Default
DefaultSymbolArcDiameter	Specify the default symbol (in unicode) for diameter for arc measurements.	
DefaultSymbolArcRadius	Specify the default symbol (in unicode) for radius for arc measurements.	
SymbolList = <i>alphanum</i>	Specifies a comma-separated list of symbols (in unicode) for arc measurements. <b>Example:</b> u0398, u2221, u2248.	

## Angle Measurements

Configure default symbol and list of symbols for 2D/EDA/3D angle measurements.

[UDE\_ANGD]

Parameter	Description	Default
DefaultSymbolAngle	Specify the default symbol (in unicode) for angle measurements.	
SymbolList = <i>alphanum</i>	Specifies a comma-separated list of symbols (in unicode) for angle measurements. <b>Example:</b> u0398, u2221, u2248.	

## Distance Measurements

Configure default symbol and list of symbols for 2D/EDA distance and cumulative distance measurements.

[UDE\_DIS] or [UDE\_CDIS]

Parameter	Description	Default
DefaultSymbolDist	Specify the default symbol (in unicode) for distance measurements.	
SymbolList = <i>alphanum</i>	Specifies a comma-separated list of symbols (in unicode) for distance measurements. <b>Example:</b> u0398, u2221, u2248.	

## 3D Distance Measurements

Configure default symbol and list of symbols for 3D distance measurements.

[UDE\_LDIM]

Parameter	Description	Default
DefaultSymbolDist	Specify the default symbol (in unicode) for diameter for 3D distance measurements.	
DistanceUnits	Specify the default unit for 3D distance measurements.	1 (inches)
SymbolList = <i>alphanum</i>	Specifies a comma-separated list of symbols (in unicode) for 3D distance measurements. <b>Example:</b> u0398, u2221, u2248.	

# Calibrate Measurements

Specify the default units for measurements.

[Calibrate]

Parameter	Description	Default
AreaUnits	Specify the default unit for area measurements.	1 (inches sq.)
DistanceUnits	Specify the default unit for distance measurements.	1 (inches)

The following table lists units and the integer value that represents the unit in the INI file:

Unit	value
pixels	0
inches	1
feet	2
yards	3
miles	4
millimeters	5
centimeters	6
meters	7
kilometers	8
twips	9
microns	10
mils	11
mils/10	12
microinches	13



# Script and DDE Commands

AutoVue registers itself as a Dynamic Data Exchange (DDE) server under the name **AVWINSERVER**. Commands should be sent using the topic **SYSTEM**. AutoVue can be launched from the command line with the **/s scriptfilename** option to automatically execute the specified script on startup. Below is a full listing and description of the available scripting commands. The scriptfile itself is an ASCII text file, containing scripting commands.

The pound (#) character is used to add comments to the scriptfile. Any text after the pound character to the end of the line is ignored. Also, the backslash (\) character at the end of a line can be used to continue a long line to the next line.

## Script Syntax Diagrams

The description of script commands follows certain conventions which may vary from other parts of the Administrator Guide:

Command	Description
<angular brackets>	Indicates required entries but are not to be included in the entered information.
{curly braces}	Indicates optional entries but are not to be included in the entered information.
[square brackets]	Required syntactical elements.
(parentheses)	Required syntactical elements.
bold	Introduces a literal expression which must be entered exactly as shown.
italics	Indicates a variable which must be replaced by information you provide
	Symbol indicates an either-or type of choice.
...	Ellipsis indicates that information may be repeated.

# Window Commands

These are the standard Windows messages. They apply to the frame window as a whole.

## Message

WINDOW HIDE

WINDOW SHOW

WINDOW POSITION x y width height

WINDOW RESTORE

WINDOW MINIMIZE

WINDOW MAXIMIZE

WINDOW TILE

WINDOW CASCADE

# Child Commands

These are the standard Windows MDI child commands.

## Command

CHILD CLOSE

CHILD HIDE

CHILD MINIMIZE

CHILD MAXIMIZE

CHILD NEW

CHILD POSITION - x y width height

CHILD RESTORE

CHILD SELECT n - Activates the nth child window -- where n is a 1-indexed number (not zero-indexed).

CHILD SHOW

CHILD SHOWONE - If no child exists, creates a new one.

## General Commands

Command	Description
BREAK = <ON OFF>	Controls interruptibility. When set to <b>ON</b> , interruptible.
CHDIR <dirname>	Changes the working directory.
PAUSE <nn>	Pauses for nn milliseconds.
QUIT	Terminates the application.
VIEW <filename>	Open file <filename>.
WRITEPROFILE "section" "entry" "value"	Writes the entry/value under the specified section into AutoVue's INI file.

## File Commands

Command	Description
BROWSE	Activates the <b>Browse</b> dialog.
COMPARE <filename>	Compares the file in the active window with "filename".
FILE NAME {filename}	Same as <b>VIEW</b> , except that if {filename} is not supplied it displays the <b>File Open</b> dialog.
FILE-NEXT	Goes to the next file.
FILE-PREVIOUS	Goes to the previous file.

LAUNCH {appname}	The {appname} must match an application defined as an association for the current file type. If it is omitted, the <b>Launch</b> dialog displays.
OVERLAY <filename> {<x, y> {sf}}	Overlays the specified file over the current file (base drawing). The point (x, y) is the offset for the overlaid file expressed in base drawing units. The origin of raster images is in the top left, and for vector images it is in the bottom left. It (sf) is the scaling factor for the overlay. Default values of (0.0, 0.0) and 1.0 are used for the base point and scaling factor.
PROPERTIES	Displays the Properties dialog.
SEARCH = <string to search for>	Finds and highlights the search string.

## Export BOM Commands

Command	Description
EXPORT3DBOM FileName	Specify the output file into which to export 3D BOM results.



EXPORTEDABOM Filename ["format=XXX scope=YY attributes =Aaaaa,Bbbbb,Ccccc"]	<p><b>Filename:</b> Specify the file name of the exported BOM.</p> <p><b>format:</b> Specify whether the export file format is either <b>CVS</b> or <b>PDX</b>. Default value is <b>CVS</b> if nothing is specified.</p> <p><b>scope:</b> Specify either <b>CP</b> (current page) or <b>ED</b> (entire design). Default is <b>CP</b> if nothing is specified.</p> <p><b>attributes:</b> Specify the attribute names of Component Instances. Separate attribute names by commas. If no attributes are specified, the default BOM attribute names are used. If there are no default BOM attribute names, the command does nothing.</p> <p><b>Note</b> Attributes are case sensitive.</p> <p><b>Note</b> The vertical line symbol used in the second parameter (" ") is an actual symbol needed and used as a separator, not the logical symbol used to specify that only one of the parameters can be used.</p>
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## Printing Commands

Command	Description
PRINT-OPTION <i>option=value</i>	Specify the print option and value.
PRINT	Using the current print options, prints the file in the active window.

## Print Options

Command	Description
AREA = <DISPLAY   EXTENTS>	Specify print area (extents or display).
CF = <i>string</i>	Center footer text.
CH = <i>string</i>	Center header text.

LF = <i>string</i>	Left footer text.
LH = <i>string</i>	Left header text.
RH = <i>string</i>	Right header text.
RF = <i>string</i>	Right footer text.
COPIES = <number of copies>	Specify number of copies.
ORIENTATION = <P   L>	Specify orientation.
PAGERANGE CURRENT = <from page nnn-to page mmm>	Specify page range.
PAGERANGE CURRENT	Prints current page.
SCALE = <FIT   <i>nn.nn</i> / <i>n%</i> >	Set <i>n%</i> to the scale value. <b>Example:</b> PRINT-OPTION SCALE = 60% Set <i>nn.nn</i> to a scale factor.
UNITS = <INCH   MM   PIXEL>	Specify units.
WATERMARK "watermark-text"	Specify watermarking text.
FORCETOBLACK = <0 1>	Specify if you want to force all colors to black
ORIENTATION [L   P]	Specify orientation. Set <b>L</b> for landscape or <b>P</b> for portrait.
RINTDRIVER "drivename"	Specify the print device to use, e.g. "Epson Stylus Color 750."
PENMAPFILE "penmapfilename"	Specify the penmapping file to use.
PAPERSIZE "nPaperSize"	Specify the paper size, where <b>nPaperSize</b> is a value from the <b>nPaperSize</b> column in the following table. The specified paper size specified must be supported by your printer.

Name	nPaperSize	Description
DMPAPER_LETTER	1	/* Letter 8 ½ x 11 in */
DMPAPER_LETTERSMA LL	2	/* Letter Small 8 ½ x 11 in */
DMPAPER_TABLOID	3	/* Tabloid 11 x 17 in */
DMPAPER_LEDGER	4	/* Ledger 17 x 11 in */
DMPAPER_LEGAL	5	/* Legal 8 ½ x 14 in */
DMPAPER_STATEMENT	6	/* Statement 5 ½ x 8 ½ in */
DMPAPER_EXECUTIVE	7	/* Executive 7 ¼ x 10 ½ in */
DMPAPER_A3	8	/* A3 297 x 420 mm */
DMPAPER_A4	9	/* A4 210 x 297 mm */
DMPAPER_A4SMALL	10	/* A4 Small 210 x 297 mm */
DMPAPER_A5	11	/* A5 148 x 210 mm */
DMPAPER_B4	12	/* B4 (JIS) 250 x 354 */
DMPAPER_B5	13	/* B5 (JIS) 182 X 257 */
DMPAPER_FOLIO	14	/* Folio 8 ½ x 13 */
DMPAPER_QUARTO	15	/* Quarto 215 x 275 mm */
DMPAPER_10X14	16	/* 10 x 14 in */
DMPAPER_11X17	17	/* 11 x 17 in */
DMPAPER_NOTE	18	/* Note 8 ½ x 11 in */
DMPAPER_ENV_9	19	/* Envelope #9 3 <sup>7</sup> / <sub>8</sub> x 8 <sup>7</sup> / <sub>8</sub> */
DMPAPER_ENV_10	20	/* Envelope #10 4 <sup>1</sup> / <sub>8</sub> x 9 ½ */
DMPAPER_ENV_11	21	/* Envelope #11 4 ½ x 10 <sup>3</sup> / <sub>8</sub> */

DMPAPER_ENV_12	22	/* Envelope #12 4 276 x 11 */
DMPAPER_ENV_14	23	/* Envelope #14 5 x 11 ½ */
DMPAPER_CSHEET	24	/* C size sheet */
DMPAPER_DSHEET	25	/* D size sheet */
DMPAPER_ESHEET	26	/* E size sheet */
DMPAPER_ENV_DL	27	/* Envelope DL 110 x 220 mm */
DMPAPER_ENV_C5	28	/* Envelope C5 162 x 229 mm */
DMPAPER_ENV_C3	29	/* Envelope C3 324 x 458 mm */
DMPAPER_ENV_C4	30	/* Envelope C4 229 x 324 mm */
DMPAPER_ENV_C6	31	/* Envelope C6 114 x 162 mm */
DMPAPER_ENV_C65	32	/* Envelope C65 114 x 229 mm */
DMPAPER_ENV_B4	33	/* Envelope B4 250 X 353 mm */
DMPAPER_ENV_B5	34	/* Envelope B5 176 x 250 mm */
DMPAPER_ENV_B6	35	/* Envelope B6 176 x 125 mm */
DMPAPER_ENV_ITALY	36	/* Envelope 110 x 230 mm */
DMPAPER_ENV_MONARCH	37	/* Envelope Monarch 3.875 x 7.5 in */
DMPAPER_ENV_PERSONAL	38	/* 6 ¾ Envelope 3 ⅝ x 6 ½ in */
DMPAPER_ENV_FANFOLD_US	39	/* US Std Fanfold 8½ x 12 in */
DMPAPER_ENV_FANFOLD_STD_GERMAN	40	/* German Std Fanfold 8½ x 12 in */
DMPAPER_ENV_FANFOLD_LGL_GERMAN	41	/* German Legal Fanfold 8½ x 13 */
DMPAPER_ISO_B4	42	/* B4 (ISO) 250 x 353 mm */

DMPAPER_JAPANESE_POSTCARD	43	/* Japanese Postcard 100 x 148 mm */
DMPAPER_9X11	44	/* 9 x 11 in */
DMPAPER_10X11	45	/* 10 x 11 in */
DMPAPER_15X11	46	/* 15 x 11 in */
DMPAPER_ENV_INVITE	47	/* Envelope Invite 220 x 220 mm */
DMPAPER_RESERVED_48	48	/* RESERVED--DO NOT USE */
DMPAPER_RESERVED_49	49	/* RESERVED--DO NOT USE */
DMPAPER_LETTER_EXTRA	50	/* Letter Extra 9 1/2 x 12 in */
DMPAPER_LEGAL_EXTRA	51	/* Legal Extra 9 1/2 x 15 in */
DMPAPER_TABLOID_EXTRA	52	/* Tabloid Extra 11.69 x 18 in */
DMPAPER_A4_EXTRA	53	/* A4 Extra 9.27 x 1.69 in */
DMPAPER_LETTER_TRANSVERSE	54	/* Letter Transverse 8 1/2 x 11 in */
DMPAPER_A4_TRANSVERSE	55	/* A4 Transverse 210 x 297 mm */
DMPAPER_LETTER_EXTRA_TRANSVERSE	56	/* Letter Extra Transverse 9 1/2 x 12 in */
DMPAPER_A_PLUS	57	/* SuperA/SuperA/A4 227 x 356 mm */
DMPAPER_B_PLUS	58	/* SuperB/SuperB/A3 305 x 487 mm */
DMPAPER_LETTER_PLUS	59	/* Letter Plus 8.5 x 12.69 in */
DMPAPER_A4_PLUS	60	/* A4 Plus 210 x 330 mm */

DMPAPER_A5_TRANSVERSE	61	/* A5 Transverse 148 x 210 mm */
DMPAPER_B5_TRANSVERSE	62	/* B5 (JIS) Transverse 182 x 257 mm */
DMPAPER_A3_EXTRA	63	/* A3 Extra 322 x 445 mm */
DMPAPER_A5_EXTRA	64	/* A5 Extra 174 x 235 mm */
DMPAPER_B5_EXTRA	65	/* B5 (ISO) Extra 201 x 276 mm */
DMPAPER_A2	66	/* A2 420 x 594 mm */
DMPAPER_A3_TRANSVERSE	67	/* A3 Transverse 297 x 420 mm */
DMPAPER_A3_EXTRA_TRANSVERSE	68	/* A3 Extra Transverse 322 x 445 mm */

PRINT-OPTION PAPERTRAY  
"nPaperTray"

Specify the paper tray, where **nPaperTray** is a value from the **nPaperTray** column in the following table. The specified paper tray must be supported by your printer.

Name	nPaperTray
DMBIN_UPPER	1
DMBIN_ONLYONE	1
DMBIN_LOWER	2
DMBIN_MIDDLE	3
DMBIN_MANUAL	4
DMBIN_ENVELOPE	5
DMBIN_ENVMANUAL	6

DMBIN_AUTO	7
DMBIN_TRACTOR	8
DMBIN_SMALLFMT	9
DMBIN_LARGEfmt	10
DMBIN_LARGEcapacity	11
DMBIN_CASSETTE	14
DMBIN_FORMSOURCE	15
DMBIN_LAST	DMBIN_FORMSOURCE
DMBIN_USER	256 /* device-specific bins start here

# Conversion Commands

Command	Description
CONVERT	Converts the file in the active window using the current convert options.
CONVERT-OPTION <i>option</i> = <i>value</i>	Specify the convert option and value.

# Convert Options

Command	Description
AREA = <DISPLAY   EXTENTS>	Specify convert area (display or extents).
SCALE = <0 1>	Converts the output file to the set scale. Set to <b>1</b> to enable scaling. Set to <b>0</b> to disable scaling. Default is 0.
SCALINGFACTOR = <value>	Specify a range from <b>0%</b> to <b>100%</b> . Default is 100%. Affects the scaling size when INI option <b>SCALE</b> = <b>1</b> (see previous option).

---

FORMAT = <i>format</i>	<p>Where <i>format</i> specifies an output driver. Available output drivers:</p> <ul style="list-style-type: none"><li>• <b>PCRS_BMP</b>: windows bitmap</li><li>• <b>PCRS_EPS</b>: Encapsulated PostScript (raster)</li><li>• <b>PCRS_GP4</b>: CALG Group IV Type 1</li><li>• <b>PCRS_PCL</b>: HP/PCL output</li><li>• <b>PCRS_PCX</b>: Paintbrush PCX</li><li>• <b>PCRS_RLC</b>: RLC format</li><li>• <b>PCRS_TIF</b>: TIFF format</li><li>• <b>PC3D_STL</b>: 3D format to STL</li></ul>
SUBFORMAT = <i>n</i>	<p>Some of the output drivers support several subformats. The value <b>n</b> specifies which subformat to use.</p>
PCRS_PCL	<p>HP/PCL output.</p> <p><b>Subformat:</b> <b>0</b> - 75 DPI <b>1</b> - 150 DPI <b>2</b> - 300 DPI</p>
PCRS_TIF	<p>TIFF format.</p> <p><b>Subformat:</b> <b>0</b> - Uncompressed <b>1</b> - Packbits compressed <b>2</b> - Group III compressed <b>3</b> - Group IV compressed</p>
OUTPUT = <i>filename</i>	<p>Specifies output filename. If not specified, the default name is used.</p>

---



PAGESIZE = <i>pagesize</i>	For certain formats (e.g. plotter formats) the output size is specified as a page size. In this case, page size can be: A B C D E A4 A3 A2 A1 A0
SIZE = <i>width height</i>	Specifies the size of the converted output. <b>See CONVERT OPTION PAGESIZE</b>
STEPSPERINCH = <i>n</i>	Certain formats (e.g. plotter formats) allow a resolution factor to be set.
UNITS = <INCH   MM>	Specifies the output units. This option applies only for vector output formats. Raster output units are always assumed to be in pixels.

## View Commands

Command	Description
ANTI-ALIAS <ON OFF>	Controls the anti-aliasing (scale-to-grey) for monochrome raster images.
BLOCK { <i>blockname</i> }	Displays the specified block If no blockname is given, the Blocks dialog appears.
CONTRAST [LIGHT   NORMAL   DARK   DARKEST]	Controls the contrast for monochrome raster images. The default setting is NORMAL.
FLIP <NONE   HORZ   VERT   BOTH>	Flips the image as specified.
LAYER (ALL) <ON   OFF>	Turns all layers either on or off.

LAYER <layername1 { ... } (ON   OFF)>	Turns the specified layers on or off.
NAMEDVIEW {viewname}	Sets the view to the specified named view. If no viewname is given, the Named Views dialog appears.
PAGE n	Goes to the specified page.
PAGE-NEXT	Goes to the next page.
PAGE-PREV	Goes to the previous page.
PAN <fromx fromy tox toy>	Pans the image from (fromx, fromy) to (tox, toy), in World Coordinates.
PAN <x-diff y-diff>	Pans the image by the specified amount, in World Coordinates.
REFRESH	Redraws the image.
ROTATE <0   90   180   270>	Rotates the image by the specified amount.
SHELL {command}	Executes the specified command. If no command is given, starts a command shell.
TILEMODE <AUTO   OFF   ON>	This option only applies to AutoCAD drawings. Sets the tilemode to the value in the drawing file, or to Paperspace or Modelspace, respectively.
VPOINT x y z	Changes the viewpoint of a 3D image.
ZOOM minx miny maxx maxy	Zooms into the box specified by (minx, miny) (maxx, maxy). The values are given in World Coordinates. This command will set view extents without considering file scale and offset.
ZOOM percent	Zooms by the specified percentage.
ZOOM-FIT	Fits the image to the window.
ZOOM-FITHORZ	Fits the image horizontally.
ZOOM-FITVERT	Fits the image vertically.
ZOOM-FULLRES	This option only applies if the image being viewed is a raster file. Displays the image at full resolution.

---

ZOOM-INWORLD <i>minx miny maxx maxy</i>	Draw a zoom box using world (drawing) coordinates.
---	--

---

# Markup Commands

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Command	Description
MARKUP { <i>ID</i> }	Selects a Markup file to display over the current file. If no ID is given, displays the <b>Select-Markup</b> dialog.
MARKUPQUIT	Quits Markup mode.
MARKUPSETACTIVE <Extension of Markup to active>	Specify extension of the Markup to be made active. <b>Example:</b> 001, 002

---

# Option Commands

---

Command	Description
OPTION MENU <ON   OFF>	Indicates whether the top menu displays.
OPTION MENU DELETE < <i>N</i> >	Deletes the Nth menu item. The menus are numbered from 0 to nMenus-1
OPTION MENUITEM DELETE < <i>N M</i> >	Deletes, disables or enables the Mth menu item in the Nth menu. Both the menus and menu items are numbered, starting at zero.
OPTION TOOLBAR <ON   OFF>	Indicates whether the top toolbar displays.
OPTION STATUSBAR <ON   OFF>	Indicates whether the status-bar area displays.
OPTION TEXT <ON   OFF>	Indicates whether text displays.
OPTION FONTS [ON   OFF]	Indicates whether fonts display.

---

OPTION LINSTYLES <ON   OFF>	Indicates whether the linestyles display.
OPTION DIMENSIONS <ON   OFF>	Indicates whether dimensions display.
OPTION FILLING <ON   OFF>	Indicates whether filling displays.
OPTION XREF <ON   OFF>	Indicates whether external references display.
OPTION RASTERDISPLAY <FULL   FIT>	Sets the default for the initial display of raster files (at full resolution or fit to the window).
OPTION BASEFONT <i>fontname</i> {normal   bold   italic   bold-italic} <i>pointsize</i>	Sets the default base font for text-and number-based files. This font is used if actual font is not specified in the file itself.
OPTION BGCOLOR { <i>red green blue</i> }	Sets the background color for the view window. Specify the color as an RGB triplet, each index ranging from 0 to 255.

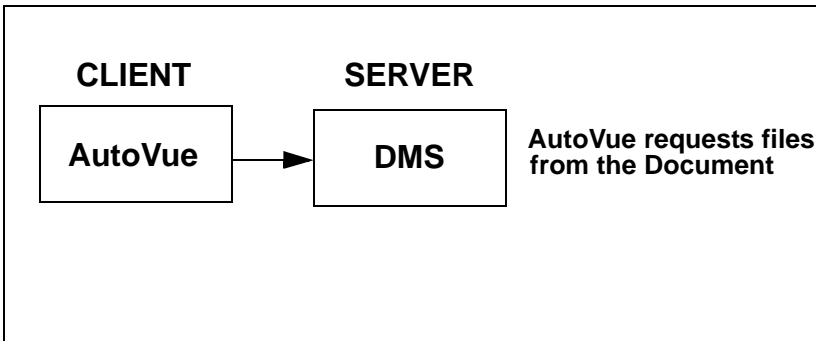
# Integration

Extend the functionality of your existing applications by integrating with AutoVue.

The added practicality will result in savings for both you and your organization in terms of time and money. To learn more, continue reading the contents of this chapter.

## Defining Integration

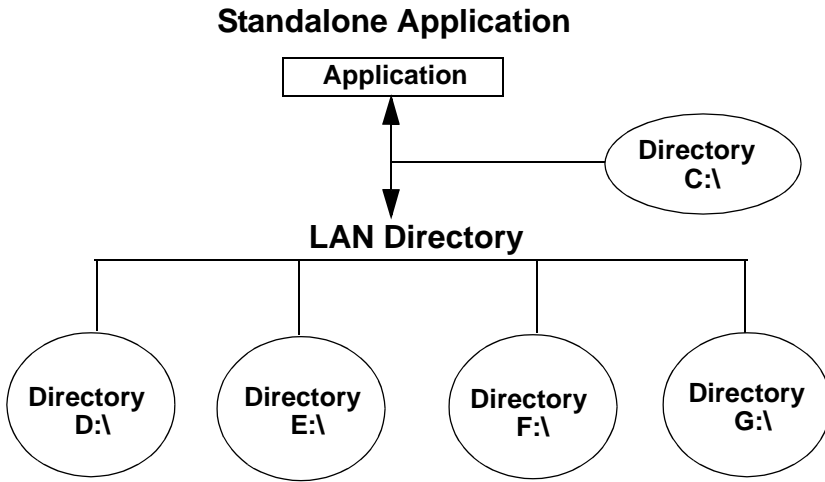
Integration is a way of connecting an existing application – the host/server – with applications that have unique areas of expertise thereby enhancing the host application by expanding its abilities.



There are two main benefits of integration:

- **Interoperability:** AutoVue's technology enables you to share data and resources from a vast array of applications since AutoVue displays more than 450 different file formats.
- **A consistent user interface:** The existing software application's graphic interface is always present other than when the AutoVue graphic interface appears to provide the additional viewing capabilities. This minimizes retraining requirements since you only have to learn how to use the new abilities that have been merged with your existing software.

Integration is achieved via scripting, Object Linking and Embedding (OLE) automation, Dynamic Data Exchange (DDE) and Dynamic-Link Library (DLL). In addition, there are interfaces that can be used through Visual Basic and ActiveX technologies.



AutoVue currently allows you to view over 450 file formats including engineering, graphics and desktop file formats. In addition, you can mark up these files to communicate your ideas and observations. Often, to mark up a file it is necessary to recreate a file if you don't have a version of the authoring application. With AutoVue you can immediately mark up the document while preserving the original document since Markups are stored in their own file that is tightly linked to the original document. Another benefit is that external references are clearly visible on the active drawing and they are accessible just as with the original application.

## Integrating with AutoVue

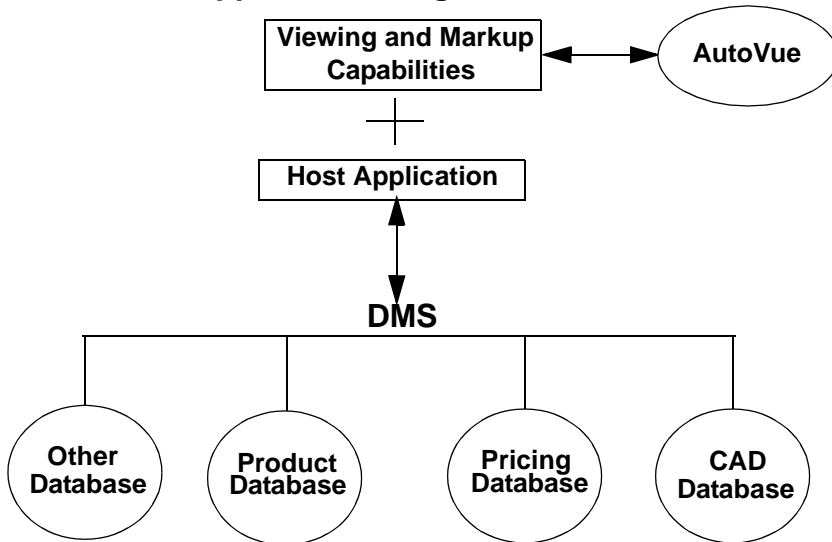
There are three ways to integrate AutoVue with various host applications:

- Using Cimmetry's out-of-the-box integrations available for most major document management systems. These are marketed under the name of VueLink.
- Performing a custom integration. Cimmetry's products are developed with an open API allowing for ease of custom integration with various host systems.
- Third party value-added integrations are available in several cases between some of the more popular document management systems on the market.

AutoVue integrates with all types of host systems including the following:

- DM (Document Management)
- EDM (Electronic Data Management)
- PDM (Product Data Management)
- TDM (Technical Data Management).
- ASPs (Application Service Providers) and corporate portals
- ERP (Enterprise Resource Planning)
- CMMS (Computerized Maintenance Management Systems)

### An Application Integrated with a DMS



When AutoVue is integrated with a DMS, the documents and their associated Markup files are easily accessible for all individuals who have access to the DMS since files are registered in the DMS repository and are accessed through AutoVue's **File** menu. Markup files are returned to the DMS repository with AutoVue's **Save As** option. AutoVue is designed to work under established workflow procedures and its integration with DM, EDM and PDM systems supports access controls and different user privileges. Advanced features such as Master Markups and Consolidated Markups are also provided. Furthermore, AutoVue's Web plug-in enables access to literally thousands of sources of data.

- **Quick Viewing:** AutoVue is integrated with Windows Explorer to allow you to view numerous other file formats than would otherwise be available to you as a Windows user.

There are two types of integration that are immediately available after installing AutoVue on your system: DDE Integration and DLL Integration.

## DDE Integration

DDE is a popular mechanism that allows applications to communicate with each other. Using DDE, the same commands that are available through scripting can be transmitted so that AutoVue can be dynamically controlled at runtime by an external application. AutoVue registers itself as a DDE server under the name “**AVWINSERVER.**” Commands should be sent using the topic “**SYSTEM.**”

A sample DDE C++ client application is provided in the AutoVue installation directory under the subdirectory `integrat\dde`.

The DDE Commands should be sent using the “**XTYP\_EXECUTE**” method and data sent as text (**CF\_TEXT**). The set of commands available is identical in syntax and semantics to those available for scripting and OLE Automation. For a full listing and description of the available scripting commands, see [AutoVue Command Summary](#).

## DLL Integration

AutoVue’s API provides a DLL wrapper around its DDE interface. This allows programming languages that do not support DDE but are able to call exported Windows DLL functions to access AutoVue’s DDE functionality. Programmers who do not want to code low-level DDE client/server code can also use the DLL wrapper—the wrapper library handles the details.

The DLL wrapper comprises:

- **avlink.dll**: The wrapper DLL
- **avlink.lib**: The Microsoft-compatible import library for `avlink.dll`
- **avlink.h**: A C/C++ header file for the DLL entry points

The following entry points are defined:

Entry Point	Description
<code>#define PCALLBACK_far _pascal __export _loadds</code>	
<code>BOOL PCALLBACK AVLINK_Start(LPRECT rcPos)</code>	Starts up AutoVue, positioning AutoVue in the rectangle specified by <code>rcPos</code> .



Entry Point	Description
BOOL PCALLBACK AVLINK_End(void)	Terminates AutoVue.
BOOL PCALLBACK AVLINK_TransmitCommand(LPCSTR szCommand)	Sends the command, szCommand, to AutoVue. The same set of commands used in DDE can be used here.
BOOL PCALLBACK AVLINK_Activate(int nChild)	Activates the nth child window of AutoVue. Similar to the CHILD AVTIVATE command.
BOOL PCALLBACK AVLINK_Compare(LPCSTR szFileName)	Initiates a file comparison with the specified file. Similar to the FILE COMPARE command.
BOOL PCALLBACK AVLINK_Markup(LPCSTR szMarkupID)	Initates Markup mode. Similar to the MARKUP command.
BOOL PCALLBACK AVLINK_Overlay(LPCSTR szMarkupID)	Initates Markup mode. Similar to the OVERLAY command.
BOOL PCALLBACK AVLINK_Properties(void)	Displays the File Properties dialog.
BOOL PCALLBACK AVLINK_ShowWindow(BOOL fShow)	Shows/hides the AutoVue application.
BOOL PCALLBACK AVLINK_ShowViewWindow(BOOL fShow)	Shows/hide the active MDI child.
BOOL PCALLBACK AVLINK_View(LPCSTR szFileName)	Opens and views the specified file.

Sample DLL client applications in “C” and Visual Basic are provided in the AutoVue installation directory under the subdirectory **integrat\dl**.

## OLE Automation

OLE Automation is a popular successor to DDE. OLE Automation integration methods are available in a wide variety of products including Visual Basic and the Microsoft Office product line. It is a powerful, yet simple interface. Many developers use it since modules that are developed can be reused by other

applications. Again, all the functionality that is available through Scripting and DDE is available through OLE Automation — in fact, the commands available are the same, making the transition from DDE/Scripting to OLE Automation a more straightforward task for programmers.

OLE Automation offers you the opportunity of taking OLE's integration capabilities one step further — you can now automate tasks as you would from a DDE script file, but from within your target or container application, using a simple macro language and pre-existing DDE script commands. OLE embedding, as provided by AutoVue, provides the end user with a great way to compose what is called compound documents using objects from a variety of different types. Still, that method of integration is fairly static, limiting its use to the production of presentation documents.

An OLE Automation client should connect to the object:

- **AutoVue.Application**

AutoVue's OLE Automation exposes two methods:

- **TransmitCommand** ("*command-string*")
- **Execute** ("*command-string*")

The methods are synonymous — either one can be used by the client application. The set of commands available is identical in syntax and semantics to that available for scripting and DDE. For a full listing and description of the available scripting commands, see [AutoVue Command Summary](#).

OLE Automation is ideally suited for the BASIC dialect used to program Microsoft Word or Excel, but is also easy to use with any OLE 2.0-compliant application. Let us look at an example of OLE automation using Microsoft Excel:

**OLE Automation Example:**

```
; Declare the OLE Automation Object
Dim OleObj As Object
; Function: Create the Ole automation object. Must be called once when
; your program starts up.
Sub LoadOleObj()
    ' Create the OLE Automation Object
    Set OleObj = CreateObject("AutoVue.Application")
End Sub
; Function: Destroy the Ole automation object.
; Must be called once when your program exits. Performs necessary
; cleanups.
Sub UnloadOleObj()
```

```

If (IsObject(OleObj)) Then
    ' Close the window
    OleObj.Execute ("CHILD CLOSE")
End If
' Clean up
Set OleObj = Nothing
End Sub
; Function: This sample function accessed
; to OLE Automation object and performs several operations.
; You should put in your own code here.
Sub ExecuteOleObj()
    If (IsObject(OleObj)) Then
        ' Copen file
        'OleObj.Execute ("FILE OPEN C:\AV19.1\samples\Desktop-
Office\Word.doc")
        OleObj.Execute ("FILE OPEN ""C:\AV19.1\samples\3d\3D
Compare\Component_V1\Component.SLDASM""")
        OleObj.Execute ("COMPARE ""C:\AV19.1\samples\3d\3D
Compare\Component_V2\Component.SLDASM""")

        ' Display window: The Application is, by default, hidden
        OleObj.Execute ("WINDOW SHOW")
        'OleObj.Execute ("CHILD SHOW")
        ' Display another file
        'OleObj.Execute ("FILE OPEN c:\autoexec.bat")
        ' Print the file
        ' OleObj.Execute ("PRINT")
        OleObj.Execute ("COMPARE ""C:\AV19.1\samples\3d\3D
Compare\Component_V2\Component.SLDASM""")
    End If
End Sub

```

Using this syntax, OLE automation can be achieved in an easy and seamless manner. For more information on the available commands refer to the section [AutoVue Command Summary](#).

Several sample OLE Automation applications are provided in the AutoVue installation directory under the subdirectory **integrat\oleauto**.

## EDAT: Drawing Information Extraction

EDAT (Engineering Drawing Access Technology) is an OEM technology available from Cimmetry Systems Corp. A limited subset of this technology is available through AutoVue allowing users to query CAD drawings (AutoCAD DWG, DXF and MicroStation DGN) and extract entity information (geometry/extended data/attribute tags).

AutoVue's User Interface under the **Analysis** menu contains three **Drawing Information** menu items:

- **Select Single Entity:** Allows the user to select an entity and displays detailed information about the entity in a dialog.
- **List Tags/Attributes:** Allows the user to select an entity and displays detailed information about the entity in a dialog.
- **Entity Information:** Allows the user to select a rectangle, and a dialog displays entity information for all entities contained in the rectangle.

AutoVue allows the user interface to be bypassed, namely the entity selection process and the dialog that appears. Instead the drawing-information query can be performed directly and the resulting data saved in a text file. This text file can later be used by the calling application.

For more information, refer to the topic "EDAT/Drawing Information Commands" in [AutoVue Command Summary](#). It describes three API commands: EDAT ATT, EDAT INFO and EDAT LIST.

## VCET API

AutoVue is built using Cimmetry Systems's VCET (Viewing and Conversion Enabling Technology) library. VCET is the engine behind AutoVue that includes the file decoding/parsing technologies (PAFS), the rendering engines, the printing engines and the conversion engines. AutoVue itself is a user interface that sits on top of VCET. The VCET API is a Windows messaging-based API that is open, allowing developers to build custom interfaces (in the programming language of their choice). Further information on the VCET API can be found in the Docs directory of your AutoVue CD. Examples of integrations using the VCET API can be found in the Integrat directory of the AutoVue CD.

## Markup API

AutoVue's Markup component is based on CSI's Markup Library Toolkit. Like VCET, it has a message-based API. Using the Markup API, developers can easily

Markup-enable their applications. In addition to graphical Markup elements, the API also supports sticky-note objects and powerful hyperlinking features. In addition, the Markup file format used by AutoVue and the Markup Library Toolkit is fully documented, allowing developers to write custom import/export filters and to directly modify Markup elements. Used in conjunction with the VCET API, developers can quickly prototype and develop powerful viewing and Markup solutions that fit specific needs. Further information on the Markup API can be found in the Docs directory of your AutoVue CD. Examples of integrations using the Markup API can be found in the Integrat directory of the AutoVue CD.

# AutoVue Command Summary

The description of AutoVue's command syntax follows certain conventions, which may vary from other parts of the Administrator Guide. The command summary that follows applies to AutoVue's Scripting, DDE, DLL and OLE Automation API's. A common scripting language is used for these methods of integration

## Syntax Summary

Syntax	Description
<angular brackets>	Indicates required entries but are not to be included in the entered information.
{ curly braces }	Indicates optional information.
[square brackets]	Required syntactical elements.
<b>Bold</b>	Introduces a literal expression which must be entered exactly as shown.
<i>Italics</i>	Indicates a variable which you must replace by information you provide.
	Indicates an either-or type of choice.
...	Indicates that information may be repeated.

## General Commands

Command	Description
CHDIR { <i>directory_name</i> }	Changes working directory.
PAUSE { <i>nn</i> }	Pauses for nn milliseconds.
QUIT	Terminates application.

## File Commands

Command	Description
VIEW { <i>filename</i> }	Displays the specified file. If no <i>filename</i> is supplied it displays the File-Open dialog.
FILE OPEN { <i>filename</i> }	Same as VIEW.
FILE-NEXT	Goes to the next file.
FILE-PREVIOUS	Goes to the previous file.
BROWSE	Activates the Browse dialog.
COMPARE { <i>filename</i> }	Compares the file in the active window with the filename.
LAUNCH { <i>filename</i> }	apname must match an application defined as an association for the current file type. If it is omitted, display the Launch dialog.
OVERLAY { <i>filename</i> { <i>x</i> , <i>y</i> { <i>scale</i> }}	Overlays the specified file over the current file (base drawing). The point ( <i>x</i> , <i>y</i> ) is the offset for the overlaid file expressed in base drawing units. The origin of raster images is in the top left, and for vector images it is in the bottom left. Scaling is the scaling factor for the overlay. Default values of (0.0, 0.0) and 1.0 are used for the base point and scaling factor.
PROPERTIES	Displays the Properties dialog.

## View Commands

Command	Description
ANTI-ALIAS [ON   OFF]	Controls the anti-aliasing (scale-to-gray) for monochrome raster images.
BLOCK { <i>blockname</i> }	Views the specified block. If no <i>blockname</i> is given, display the Blocks dialog.

CONTRAST [LIGHT   NORMAL   DARK   DARKEST]	Controls the contrast for monochrome raster images. The default setting is NORMAL.
FLIP [NONE   HORZ   VERT   BOTH]	Flips the image as specified.
LAYER ALL [ON   OFF]	Turns all layers either ON or OFF.
LAYER [ <i>layername</i> ] { <i>layername2...</i> } [ON   OFF]	Turns the specified layers ON or OFF.
NAMEDVIEW { <i>view_name</i> }	Sets the view to the specified named view. If no view-name is given, makes the Named Views dialog appear.
PAGE { <i>n</i> }	Goes the specified page.
PAGE-NEXT	Goes to the next page.
PAGE-PREV	Goes to the previous page.
PAN [ <i>from-x from-y to-x to-y</i> ]	Pans the image from (from-x, from-y) to (to-x, to-y), in World Coordinates.
PAN { <i>x-delta y-delta</i> }	Pans the image by the specified amount, in World Coordinates.
REFRESH	Redraws the image.
ROTATE [0   90   180   270]	Rotates the image by the specified amount.
SHELL { <i>command</i> }	Executes the specified command. If no command is given, start a command shell.
TILEMODE [AUTO   OFF   ON]	This option only applies to AutoCAD drawings. Set the tile mode to the value in the drawing file, or to Paperspace, or to Modelspace, respectively.
VPOINT { <i>x y z</i> }	Changes the viewpoint of a 3-D image.
ZOOM [ <i>min-x min-y max-x max-y</i> ]	Zooms into the box specified by (min-x, min-y) (max-x, max-y). The values are given in World Coordinates.
ZOOM [ <i>percent</i> ]	Zooms by the specified percent.
ZOOM-FIT	Fits the image to the window.



ZOOM-FITHORZ	Fits the image horizontally.
ZOOM-FITVERT	Fits the image vertically.
ZOOM-FULLRES	This option only applies if the image being viewed is a raster file. Displays the image at full resolution.

## Printing Commands

Command	Description
PRINT	Using the current print options, print the file in the active window. See below for available print options.
PRINT-OPTION [ <i>option = value</i> ]	The next section describes available script options.

## Print Options

Command	Description
AREA=[DISPLAY   EXTENTS]	Specify print area (extents or display)
SCALE=[FIT   <i>scale-factor</i> ]	Specify scale factor.
UNITS=[INCH   MM   PIXEL]	Specify units.
LH=[ <i>string</i> ]	Left header text.
LH=[ <i>string</i> ]	Center header text.
RH=[ <i>string</i> ]	Right header text.
LF=[ <i>string</i> ]	Left footer text.
CF=[ <i>string</i> ]	Center footer text.
RF=[ <i>string</i> ]	Right footer text.

## Conversion Commands

Command	Description
CONVERT	Converts the file in the active window using the current convert options. See below for available conversion options.
CONVERT-OPTION [ <i>option</i> = <i>value</i> ]	The following section describes the available script options.

## Convert Options

Command	Description
AREA=<DISPLAY   EXTENTS>	Specify convert area (display or extents).
FORMAT=[ <i>format</i> ]	Where format specifies an output driver.
SUBFORMAT=[ <i>n</i> ]	Some of the output drivers support several sub-formats. The value <i>n</i> specifies which sub-format to use.
PAGES=<0 1 2>	Specify if you wish to convert All pages (0) (for TIFF only), Current Page (2) or range of pages (1).
ToPage <i>n</i>	Specify the range of pages to convert when PAGES=1.
OUTPUT=[ <i>filename</i> ]	Specifies output filename. If not specified, the default name is used.
SIZE=[ <i>width height</i> ]	Where format specifies an output driver. Specifies the size of the converted output.
STEPSPERINCH=[ <i>n</i> ]	Certain formats (e.g. plotter formats) allow a resolution factor to be set.

PAGESIZE=[ <i>page-size</i> ]	For certain formats (e.g. plotter formats) the output size is specified as a page size. In this case, page size can be one of: A, B, C, D, E, A4, A3, A2, A1, A0.
UNITS=[INCH   MM]	Specifies the output units. This option applies only for vector output formats. Raster-output units are always assumed to be in pixels.

The following table summarizes the available formats and their sub-formats:

Format	Description
Sub-Format	Sub-Format Description
PCRS_BMP	Windows bitmap
PCRS_EPS	Encapsulated PostScript (raster)
PCRS_PCL	HP/PCL output
0	75 DPI
1	150 DPI
2	300 DPI
PCRS_PCX	Paintbrush PCX
PCRS_RLC	RLC Format
PCRS_TIF	TIFF Format
0	Uncompressed
1	Packbits compressed
2	Group III compressed
3	Group IV compressed

## Markup Commands

Command	Description
MARKUP { <i>ID</i> }	Selects a Markup file to display over the current file. If no ID is given, displays the Select-Markup dialog.
MARKUPQUIT	Quits Markup mode.

## Option Commands

Command	Description
OPTION MENU <ON   OFF>	Indicates whether the top menu displays.
OPTION MENU DELETE < <i>N</i> >	Deletes the Nth menu item. The menus are numbered from 0 to nMenus-1.
OPTION MENUITEM DELETE < <i>N M</i> >	Deletes, disables or enables the Mth menu item in the Nth menu. Both the menus and menu items are numbered, starting at zero.
OPTION TOOLBAR <ON   OFF>	Indicates whether the top toolbar displays.
OPTION STATUSBAR [ON   OFF]	Indicates whether the status-bar area displays.
OPTION TEXT [ON   OFF]	Indicates whether text displays.
OPTION FONTS [ON   OFF]	Indicates whether fonts display.
OPTION LINSTYLES <ON   OFF>	Indicates whether the linestyles display.
OPTION DIMENSIONS [ON   OFF]	Indicates whether dimensions display.
OPTION FILLING [ON   OFF]	Indicates whether filling displays.
OPTION XREF [ON   OFF]	Indicates whether external references display.

OPTION RASTERDISPLAY [FULL   FIT]	Selects the default for the initial display of raster files (at full resolution or fit to the window).
OPTION BASEFONT <i>fontname</i> {normal bold italic bold-italic} <i>pointsize</i>	Selects the default base font for text- and number-based files. This font is used if the actual font is not specified in the file itself.
OPTION BGCOLOR { <i>red green blue</i> }	Sets the background color for the view window. Specify the color as an RGB triplet, each index ranging from 0 to 255.

## Window Commands

These are the standard Windows messages. They apply to the frame window as a whole.

Command	Description
WINDOW HIDE	
WINDOW SHOW	
WINDOW POSITION	[x y {width height}]
WINDOW RESTORE	
WINDOW MINIMIZE	
WINDOW MAXIMIZE	
WINDOW TILE	
WINDOW CASCADE	

## Child Commands

These are the standard Windows MDI child commands.

Command	Description
CHILD CLOSE	

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CHILD HIDE

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CHILD MINIMIZE

---



---

CHILD MAXIMIZE

---



---

CHILD NEW

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---

CHILD POSITION  
[x y {width height}]

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---

CHILD RESTORE

---



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CHILD SELECT [n]      Activates the nth child window where n is a 1-indexed number.

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CHILD SHOW

---

## EDAT/Drawing Information Commands

The following commands extract drawing information from CAD files (AutoCAD DWG, DXF and MicroStation DGN) and save the extracted data in a user-specified text file.

Command	Description
<b>EDAT ATT</b> [ <i>filename</i> [x, y]]	Extracts Attribute/extended data/attribute tag information from the currently viewed document. If specified, the extracted data is stored in filename; otherwise a dialog displays the information. If the point (x,y) is specified, the entity closest the (x,y) in World Coordinates is queried. Otherwise, the user is prompted to select a point.
<b>EDAT INFO</b> [ <i>filename</i> [x, y]]	Extracts detailed Entity information from the currently viewed document. If specified, the information is stored in filename, otherwise a dialog will display the information. If the point (x,y) is specified, the entity closest the (x,y) in World Coordinates is queried. Otherwise, the user is prompted to select a point.

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<b>EDAT LIST</b> [ <i>filename</i> [ <i>x0</i> , <i>y0</i> , <i>x1</i> , <i>y1</i> ]]	Extracts entity information for all entities contained within a bounding box from the viewed document. If specified, the extracted data is stored in <i>filename</i> ; otherwise a dialog displays the information. If the bounding box ( <i>x0</i> , <i>y0</i> -> <i>x1</i> , <i>y1</i> ) is specified then all entities contained in the bounding box, in World Coordinates are queried. Otherwise, the user is prompted to select a rectangle.
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## ActiveX Control

This section lists the following ActiveX controls for AutoVue:

- [AutoVueX Control](#)
- [AvMarkupX Control](#)
- [AvPrintX Control](#)
- [AutoVue CompareX Control](#)

For the most up-to-date information about these controls, refer to **autovux.htm**.

## AutoVueX Control

### Properties

Property	Description
<i>BSTR</i> <b>SRC</b>	Source file path.
<i>boolean</i> <b>ShowScrollBars</b>	Flag that indicates whether or not to show Scrollbars.
<i>boolean</i> <b>ShowMainToolBar</b>	Flag that indicates whether or not to show Main Toolbar.
<i>boolean</i> <b>ShowAuxiToolBar</b>	Flag that indicates whether or not to show Auxiliary Toolbar.
<i>boolean</i> <b>ShowStatusBar</b>	Flag that indicates whether or not to show Status Bar.
<i>boolean</i> <b>EnablePopupMenu</b>	Flag that indicates whether or not to enable Popup Menu.

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<i>boolean</i> <b>MrkMainToolbar</b>	Flag that indicates whether or not to show Markup MainToolbar.
<i>boolean</i> <b>MrkPensToolbar</b>	Flag that indicates whether or not to show Markup PensToolbar.
<i>boolean</i> <b>MrkEntitiesToolbar</b>	Flag that indicates whether or not to show Markup EntitiesToolbar.
<i>boolean</i> <b>MrkColorsToolbar</b>	Flag that indicates whether or not to show Markup ColorsToolbar.
<i>BSTR</i> <b>MrkFileLocation</b>	Directory where Markup files are stored.
<i>OLE_COLOR</i> <b>BgColor</b>	Background color.
<i>short</i> <b>Rotate</b>	Specifies current rotation value. Can be only 0,90, 180, 270.
<i>short</i> <b>Flip</b>	0 - No flipping 1 - Flip horizontal 2 - Flip vertical 3 - Flip both
<i>short</i> <b>Page</b>	Specifies current page.
<i>short</i> <b>Extents</b>	0 - Unchanged 1 - Fit 2 - Fit Width 3 - Custom

The following 4 properties are used to determine the extents:

Property	Description
<i>double</i> <b>ExtMinX</b>	Minimal X coordinate of extents
<i>double</i> <b>ExtMinY</b>	Minimal Y coordinate of extents
<i>double</i> <b>ExtMaxX</b>	Maximal X coordinate of extents
<i>double</i> <b>ExtMaxY</b>	Maximal Y coordinate of extents



## Methods

Method	Description
<i>void</i> <b>SetContrast</b> ( <i>long contrast Value</i> )	Set the image contrast to be the specific value; this only applies to raster files.
<i>void</i> <b>GetContrast</b> ()	Return the image contrast value. The value for the raster file can be one of the following: CONTRAST_LIGHT (-50) CONTRAST_MEDIUM (0) CONTRAST_DARK (66) CONTRAST_DARKER (100)
<i>void</i> <b>SetAntiAlias</b> ()	Scale to gray. Enhances the raster file image details that are viewed at less than 100% zoom.
<i>void</i> <b>ShowLayersDlg</b> ()	Display the <b>Layers</b> dialog.
<i>void</i> <b>ShowBlocksDlg</b> ()	Display the <b>Blocks</b> dialog.
<i>void</i> <b>ShowNamedViewsDlg</b> ()	Display the named view dialog.
<i>void</i> <b>ShowXRefDlg</b> ()	Display the XReference dialog.
<i>void</i> <b>ZoomFit</b> ()	Zoom to fit.
<i>void</i> <b>ZoomPrevious</b> ()	Undo last zoom operation.
<i>void</i> <b>ZoomWidth</b> ()	Zoom to fit width.
<i>void</i> <b>ZoomHeight</b> ()	Zoom to fit height.
<i>void</i> <b>ZoomByFactor</b> (double factor)	Zoom by factor.
<b>Parameters</b>	
factor	Zooming factor.
<i>void</i> <b>ZoomFullResolution</b> ()	Displays rasters using full resolution; for other formats same as ZoomFit.
<i>void</i> <b>PrintIt</b> (boolean bPrintDirect	Print current document.

**Parameters**

bPrintDirect	Flag indicating whether or not to show a dialog box to user.
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<i>void</i> <b>PrintPreview</b> (boolean bPreviewDirect,boolean bWantFrame)	Preview current document printing
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**Parameters**

bPreviewDirect	Flag indicating whether or not to show a dialog box to user.
bWantFrame	Flag for indicating whether or not to preview with frame.

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<i>void</i> <b>SetPrintOptions</b> (BSTR sEntry,BSTR sValue)	Set print options, call this method prior to call PrintIt or PrintPreview to set print options
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**Parameters**

<b>sEntry:</b> Currently the following options are supported:	Specify which print option to set.
PRINT_OPT_ORIENTATION	Set print page orientation.
PRINT_OPT_DISABLE_HEADERSFOOTERS	Disable/enable headers/footers print option.
PRINT_OPT_DISABLE_WATERMARK	Disable/enable watermark print option.
PRINT_OPT_DISABLE_MARGINS	Disable/enable margin print option.
PRINT_OPT_DISABLE_STAMPS	Disable/enable stamp print option
PRINT_OPT_DISABLE_PENSETTINGS	Disable/enable pen setting print option.
PRINT_OPT_DISABLE_PRINTTOFILE	Disable/enable print to file print option.
PRINT_OPT_DISABLE_PRINT	Disable/enable print function.
ALIGNMENT	Printing alignment.

PRINTOFFSETX	x offset when ALIGNMENT is set to "CUSTOM".
PRINTOFFSETY	y offset when ALIGNMENT is set to "CUSTOM".
PRINTPAGEONLY	Disable/enable print only one page print option.
LH	Specify text for header left.
CH	Specify text for header center.
RH	Specify text for header right.
LF	Specify text for footer left.
CF	Specify text for footer center.
RF	Specify text for footer right.
<b>sValue</b> - Valid values are dependent on each specific print option entry.	Option values.
PRINT_OPT_ORIENTATION	<b>PORTRAIT:</b> Set print page orientation as portrait. <b>LANDSCAPE:</b> Set print page orientation as landscape.
PRINT_OPT_DISABLE_HEADERSFOOTERS	<b>TRUE:</b> Disable headers/footers print option. <b>FALSE:</b> Enable headers/footers print option.
PRINT_OPT_DISABLE_WATERMARKs	<b>TRUE:</b> Disable watermark print option. <b>FALSE:</b> Enable watermark print option.
PRINT_OPT_DISABLE_MARGINS	<b>TRUE:</b> Disable margin print option. <b>FALSE:</b> Enable margin print option.
PRINT_OPT_DISABLE_STAMPS	<b>TRUE:</b> Disable stamp print option. <b>FALSE:</b> Enable stamp print option.
PRINT_OPT_DISABLE_PENSETTINGS	<b>TRUE:</b> Disable pen setting print option. <b>FALSE:</b> Enable pen setting print option.
PRINT_OPT_DISABLE_PRINTTOFILE	<b>TRUE:</b> Disable print to file print option. <b>FALSE:</b> Enable print to file print option.

PRINT_OPT_DISABLE_PRINT	<b>TRUE:</b> Disable print function. <b>FALSE:</b> Enable print function.
ALIGNMENT	One of the following values: <ul style="list-style-type: none"> <li>• CUSTOM</li> <li>• TOPLEFT</li> <li>• TOPCENTER</li> <li>• TOPRIGHT</li> <li>• MIDDLELEFT</li> <li>• CENTER</li> <li>• MIDDLERIGHT</li> <li>• BOTTOMLEFT</li> <li>• BOTTOMCENTER</li> <li>• BOTTOMRIGHT</li> </ul>
PRINTOFFSETX	Value in print units.
PRINTOFFSETY	Value in printing units.
PRINTPAGEONLY	Disable/enable print only one page print option. <b>1:</b> Enable option <b>0:</b> Disable options
LH	Text for header left.
CH	Text for header center.
RH	Text for header right.
LF	Text for footer left.
CF	Text for footer center.
RF	Text for footer right.
<i>long</i> <b>GetVcetHandle()</b>	<b>Return Value:</b> Returns handle of the VCET window.
<i>boolean</i> <b>EnterMarkupMode()</b>	Enter Markup mode.  <b>Return Value:</b> <b>TRUE</b> - entered Markup mode successfully <b>FALSE</b> - otherwise

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<i>boolean</i> <b>ExitMarkupMode()</b>	Exit Markup mode.  <b>Return Value:</b> <b>TRUE</b> - exited Markup mode successfully <b>FALSE</b> - user canceled operation
<i>IDispatch</i> * <b>MrkObj()</b>	<b>Return Value:</b> Returns pointer to AvMarkupX object if in Markup mode otherwise returns NULL
<i>IDispatch</i> * <b>PrnObj()</b>	<b>Return Value:</b> Returns pointer to AvPrintX object if in Print Preview mode otherwise returns NULL
<i>short</i> <b>GetMode()</b>	<b>Return Value:</b> Returns current mode  <b>0</b> - View mode <b>1</b> - Markup mode <b>2</b> - Print Preview mode
<i>void</i> <b>PageNext()</b>	Displays next page.
<i>void</i> <b>PagePrevious()</b>	Displays previous page.
<i>void</i> <b>PageSelect()</b>	Selects page number.
<i>boolean</i> <b>GetMousePos</b> (double* pPosX, double* pPosY)	<b>Return Value:</b> <b>TRUE</b> if mouse is in the window rectangle; <b>FALSE</b> otherwise
<b>Parameters</b>	
*pPosX	X coordinate of mouse position
*pPosY	Y coordinate of mouse position
<i>void</i> <b>ZoomInWorld</b> (double MinX, double MinY, double MaxX, double MaxY)	Zoom box. The box is specified in world coordinate
<b>Parameters</b>	
MinX	The x-coordinate of the low-left corner of a zoom box.

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MinY	The y-coordinate of the low-left corner of a zoom box.
MaxX	The x-coordinate of the upper-right corner of a zoom box.
MaxY	The y-coordinate of the upper-right corner of a zoom box.
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<i>boolean</i> <b>SetLicenseFilePath</b> (BSTR sLic Path)	Set path environment variable for AutoVueX OCX control.
	<b>Return Value:</b> <b>TRUE</b> if the path environment variable is set <b>FALSE</b> - otherwise
<b>Parameters</b>	
sLicPath	The path where the AutoVueX OCX is located
<hr/>	
<i>boolean</i> <b>EnableMarkup</b> (boolean fEnable)	Enable or disable Markup function.
	<b>Return Value:</b> The previous Markup status.
<b>Parameters</b>	
fEnable	Enable Markup if <b>TRUE</b> , disable it otherwise.
<hr/>	
<i>void</i> <b>EnablePanMode</b> (boolean bEnable)	Enable or disable Pan Mode
<b>Parameters</b>	
bEnable	Flag that indicates to turn on Pan Mode or not
<hr/>	
<i>long</i> <b>GetNumCrossProbe Entities()</b>	<b>Return Value:</b> Returns number of entities being cross-probed.
<hr/>	
<i>BSTR</i> <b>GetCrossProbeEntityType</b> (long nIndex)	<b>Return Value:</b> Returns a string that represents the internal type of the entity being cross-probed.
<b>Parameters</b>	
nIndex	Index of the entity being cross-probed.
<hr/>	

<i>BSTR</i> <b>GetCrossProbeEntityName</b> (long nIndex)	<b>Return Value:</b> Returns a string that represents the internal name of the entity being cross-probed.
<i>void</i> <b>ClearCrossProbeEntities()</b>	Marks all the entities as not used for cross-probing.
<i>void</i> <b>AddCrossProbeEntity</b> (BSTR sType, BSTR sName)	Marks an entity as used for cross-probing.
<b>Parameters</b>	
sType	Internal type of the entity.
sName	Internal name of the entity.
<i>void</i> <b>ZoomSelected()</b>	Zoom fit to the selected entity/entities.
<i>void</i> <b>ShowNetConnectivity()</b>	Highlight all the graphical entities.
<i>long</i> <b>GetNumEcadEntities</b> (LPCTSTR sType)	Return the number of entities of a specified type that are present in the loaded document
<b>Parameters</b>	
sType	Entity type.
<i>BSTR</i> <b>GetEcadEntityName</b> (LPCTSTR sType, long indx)	Return the standard name of the indexed entity of the specified type.
<b>Parameters</b>	
sType	Entity type.
indx	Entity index.
<i>long</i> <b>GetEcadEntityNAttr</b> (LPCTSTR sType, long indx)	Return the number of attributes of the specified entity
<b>Parameters</b>	
sType	Entity type.
indx	Entity index.
<i>BSTR</i> <b>GetEcadEntityAttrName</b> (LPCTSTR sType, long indx, long j)	Return the name of the 'j'th attribute of the specified entity

**Parameters**

sType	Entity type.
indx	Entity index.
j	Entity's "j"th attribute.

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*BSTR* **GetEcadEntityAttrValue** (LPCTSTR sType, long index, long j) Return the value of the 'j'th attribute of the specified entity as a string.

**Parameters**

sType	Entity type.
indx	Entity index.
j	Entity's "j"th attribute.

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*long* **GetNumEcadEntityDefs()** Return the number of entity definitions.

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*BSTR* **GetEcadEntityDefName**(long indx) Return the name of the indexed entity definition.

**Parameters**

indx	Entity index.
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*long* **GetEcadEntityDefFlags** (long indx) Return the flags of the indexed entity definition.

**Parameters**

indx	Entity index.
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*long* **GetEcadEntityDefNAttr** (long indx) Return the number of attributes of the indexed entity definition.

**Parameters**

indx	Entity index.
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*BSTR* **GetEcadEntityDefAttr Name**(long indx, long attr) Return the name of the 'attr'th attribute of the indexed entity definition.

**Parameters**



indx	Entity index.
attr	“attr” th attribute.
<i>long</i> <b>GetEcadEntityDefAttrFlags</b> (long indx, long attr)	Return the flags of the 'attr'th attribute of the indexed entity definition.
<b>Parameters</b>	
indx	Entity index.
attr	“attr” th attribute.
<i>long</i> <b>GetEcadEntityDefAttrType</b> (long indx, long attr)	Return the type of the 'attr'th attribute of the indexed entity definition.
<b>Parameters</b>	
indx	Entity index.
attr	“attr” th attribute.
<i>void</i> <b>ShowEntityTypeFilterDlg()</b>	Show Entity Type Filter dialog.
<i>void</i> <b>ShowVerifyDesignDlg()</b>	Show Verify Design dialog.
<i>void</i> <b>ShowEntityBrowserDlg()</b>	Show Entity Browser dialog.
<i>void</i> <b>ShowBillofMaterialDlg()</b>	Show Bill of Material dialog.
<i>void</i> <b>ShowEntityPropertiesDlg()</b>	Show Entity Properties dialog.
<i>void</i> <b>ShowFileVersionInfoDlg()</b>	Show File Version Information dialog.
<i>void</i> <b>SetPageByTitle</b> (BSTR sTitle)	Set the page by Title.
<b>Parameters</b>	
sTitle	Title of the page.
<i>void</i> <b>SetNamedView</b> (long lIndex)	Set Named views.
<b>Parameters</b>	
Llindex	Named view index.
<i>void</i> <b>SetNamedViewByName</b> (BSTR sName)	Set Named view by names.

**Parameters**

sName	Name of the view.
<i>void</i> <b>ShowImportDesignDlg()</b>	Show Import Design dialog.
<i>void</i> <b>EnableZoomBoxMode</b> (boolean bEnable)	Enable zoom (box) mode.

**Parameters**

bEnable	<p><b>TRUE:</b> For non-3D file format, it will force to exit from pan or magnify mode. Enable zoom mode (zoom mode is default in non-3D file formats). For 3D file formats it will force to enter the zoom mode</p> <p><b>FALSE:</b> For non-3D file format, it will not perform any action. For 3D file formats, exit zoom mode and enter rotate mode (rotate mode is default for 3D file formats).</p>
<i>void</i> <b>EnableRotateMode</b> (boolean bEnable)	Enable the rotate mode. Works only for 3D file formats

**Parameters**

bEnable	<p><b>TRUE:</b> Enter the rotate mode, will force to exit zoom, pan or spin modes.</p> <p><b>FALSE:</b> No action.</p>
<i>void</i> <b>ReCenter</b> (short nType)	Applicable to 3D file formats only, re-center the complete drawing or selected entity based on "nType".

**Parameters**

nType	<p><b>0</b> - Re-center the complete drawing.</p> <p><b>1</b> - Re-center the selected drawing.</p> <p><b>2</b> - Re-center the entity.</p>
<i>void</i> <b>ShowPMIFilteringDlg()</b>	Applicable to 3D file formats only. Show the PMI Filter dialog.
<i>void</i> <b>ShowLightingDlg()</b>	Applicable to 3D file formats only. Show the lighting dialog.

<i>void</i> <b>ShowDefineSectionDlg()</b>	Applicable to 3D file formats only. Show the Define section dialog
<i>void</i> <b>ShowUserCoordSystemsDlg()</b>	Applicable to 3D file formats only. Show the User coordinate systems dialog
<i>void</i> <b>EnableManipulators</b> (boolean bEnable)	Applicable to 3D file formats only. Enable/Disable the manipulator.
<b>Parameters</b>	
bEnable	<b>TRUE:</b> Enable the manipulator (if already active, then no action). <b>FALSE:</b> Disable the manipulator (if already disable, then no action).
<i>void</i> <b>ShowPartAlignmentDlg()</b>	Applicable to 3D file formats only. Show the Part Alignment dialog.
<i>void</i> <b>ShowModelTransformDlg()</b>	Applicable to 3D file formats only. Show the Model Transform dialog.
<i>void</i> <b>ResetTransformation()</b>	Applicable to 3D file formats only. Reset transformation.
<i>void</i> <b>ShowInterferenceCheckDlg()</b>	Applicable to 3D file formats only. Show the Interference Check dialog.
<i>long</i> <b>SelectOverlay()</b>	Opens a dialog that allows a file to be selected and added as an overlay. Returns the overlay ID, if successful, or -1 if the operation was cancelled
<i>long</i> <b>AddOverlay</b> (BSTR sFileName)	Adds sFileName as an overlay. Returns the overlay ID, if successful, or -1 if the operation failed.
<i>boolean</i> <b>RemoveOverlay</b> (long ID)	Removes the overlay with id = ID. Returns "true", if successful, or "false" if the operation failed.
<i>long</i> <b>RemoveOverlays()</b>	Removes all existing overlays.

*long* **LoadOverlay**(BSTR  
sFileName, double x, double y,  
double scale, boolean  
positionByUser, boolean  
sizeByUser)

Adds **sFileName** as an overlay using the  
supplied parameters.  
Returns the overlay ID if successful, or **-1** if  
the operation failed.

### Parameters

x,y	The coordinates of the top-left corner of the new overlay.
scale	The scale of the new overlay.
positionByUser	If <b>true</b> , the user will interactively specify the top-left corner of the overlay (position the overlay).
sizeByUser	If <b>true</b> , the user will interactively specify the scale for the overlay (resize the overlay).

*boolean* **SetOverlayParameters**  
(int ID, double x, double y, double  
scale, boolean positionByUser,  
boolean sizeByUser)

Sets overlay parameters for the specified  
overlay ID.  
For parameters description see **LoadOverlay**.

*boolean* **GetOverlayFileName**  
(int ID)

Returns the filename of the overlay with  
specified ID.

*double* **GetOverlayPosX**(int ID)

Returns the X coordinate of the top-left corner  
of the overlay with specified ID.

*double* **GetOverlayPosY**(int ID)

Returns the Y coordinate of the top-left corner  
of the overlay with specified ID.

*double* **GetOverlayScale**(int ID)

Returns the scale of the overlay with specified  
ID.

*BSTR* **GetOverlayParameters**  
(int ID, double\* x, double\* y,  
double\* scale)

Returns information about the overlay with  
specified ID.  
File name is returned as a result from this  
function, top-left position and scale are set if  
pointers to the corresponding variables are  
passed.

---

<i>boolean</i> <b>DumpModelTree</b> (BSTR fileName)	Exports the data contained in the current model tree to the specified XML file. <b>Return Value:</b> TRUE if the file could be written, FALSE otherwise.
---	--

**Parameters**

fileName	Output filename.
----------	------------------

---

<i>long</i> <b>ShowConvertDialog()</b>	Displays Conversion dialog.
--	-----------------------------

---

<i>void</i> <b>ConvertIt()</b>	Perform conversion based on the setting previously saved in <b>avx.ini</b> .
--------------------------------	--

---

<i>void</i> <b>SetConvertOptions</b> (string sEntry, string sValue1, string2 sValue2)	Save conversion settings into <b>avx.ini</b> .
---	--

**Parameters**

sEntry	Option name.
sValue1	Option value.
sValue2	Additional option value. It is used just for PAGESIZE. Must be the empty string for all other options.

**Options**

- AREA <string>  
DISPLAY | EXTENTS | ALL |SELECTED
- FORMAT <string>  
PCRS\_BMP | PCRS\_EPN | PCRS\_EPS | PCRS\_GP4 |  
PCRS\_IBM | PCRS\_PCL | PCRS\_PCX | PCRS\_RLC |  
PCRS\_TIF | PC3D\_STL
- SUBFORMAT <integer>
- OUTPUT <filename as string>
- SIZE <width as integer> <height as integer>
- STEPSPERINCH <integer>

- PAGESIZE <size as string>  
A | B | C | D | E | A4 | A3 | A2 | A1 | A0
- UNITS <unit as string>  
INCH | MM
- SCALE <scale as integer>%
- COLORDEPTH  
ORIGINAL | <number as integer>
- PAGERANGE  
<from\_page as integer>-<to\_page as integer>
- STL\_POSITIVE\_TRIANGLES  
ON | OFF

---

<i>boolean</i> <b>Export3DBom</b> (BSTR fileName)	Export 3D BOM (Bill of Material) as text file. <b>Return Value:</b> TRUE if the file could be written, FALSE otherwise.
--	--

**Parameters**

fileName	Output filename.
----------	------------------

---

<i>boolean</i> <b>ExportEdaBom</b> (BSTR sFileName, BSTR sFormat, boolean bCurPage, BSTR sAttributes)	Export EDA BOM (Bill of Material) as text file. <b>Return Value:</b> TRUE if the file could be written, FALSE otherwise.
--	--

**Parameters**

sFileName	Output filename.
sFormat	Export format, one of two values “PDX” or CSV”. If nothing is specified, "CVS" is used.
bCurPage	If BOM should be calculated for current page only or for all pages.
sAttributes	List of attributes used to calculate the BOM (separated by “,”). If nothing is specified, default list of attributes will be used.

---

<i>void</i> <b>ShowExplodeDialog()</b>	Show 3D Explode dialog. Show the 3D explode dialog. Applicable to 3D file formats only.
<i>void</i> <b>Show3DSearchDialog()</b>	Show 3D Search dialog. Applicable to 3D file formats only.
<i>bool</i> <b>SaveViewStateToFile</b> ( BSTR sFileName )	Save the current view state into an external file. <b>Return Value:</b> TRUE if the function succeeds, FALSE - otherwise.
<b>Parameters</b>	
sFileName	Output filename.
<i>bool</i> <b>RestoreViewStateFromFile</b> ( BSTR sFileName )	Restore the view state from an external file and apply it. <b>Return Value:</b> TRUE if the function succeeds, FALSE - otherwise.
<b>Parameters</b>	
sFileName	Input filename.
<i>long</i> <b>GetNumPages</b> ()	Obtain number of pages for the currently opened file. <b>Return Value:</b> Number of pages
BSTR <b>GetEcadDesignName</b> ( int nPage )	Obtain design name of a page in the EDA document. <b>Return Value:</b> Name of the design of the given page
<b>Parameters</b>	
nPage	'1' based page index.

<b>BSTR GetEcadDesignPage Type</b> ( int nPage )	Obtain design page type of a page in the EDA document. <b>Return Value:</b> Design type of the given page. Can be the following possible values: <ul style="list-style-type: none"><li>• “PCB” – PCB Layout</li><li>• “SCH” – Schematic design</li><li>• “PCB3D” – PCB 3D View</li></ul>
<b>Parameters</b>	
nPage	‘1’ based page index.
<b>BSTR GetEcadDesignPage Name</b> ( int nPage )	Obtain page name of an EDA document. <b>Return Value:</b> Name of the given page
<b>Parameters</b>	
nPage	‘1’ based page index.
<i>long</i> <b>GetNumCrossProbeHits ()</b>	Obtain number of Crossprobe “hits” generated by the previous call to AddCrossProbeEntity. <b>Return Value:</b> Number of Crossprobe “hits”.
<i>void</i> <b>ShowCrossProbeHit</b> ( long nIndex )	Instruct AutoVueX to display a Crossprobe “hit”.
<b>Parameters</b>	
nIndex	Index of the Crossprobe “hit”. Has to be between 0 and value returned by GetNumCrossProbeHits,

Events

Event	Descriptions
<i>void</i> <b>ModeChanged</b> (short nOldMode, short nNewMode)	Fired when modes changes.
<b>Parameters</b>	



Event	Descriptions
nOldMode	OldMode value (see <b>GetMode</b> method for values).
nNewMode	NewMode value (see <b>GetMode</b> method for values).
<i>void</i> <b>StatusChanged</b> (short nNewStatus)	Fired when status changes.
<b>Parameters</b>	
nNewStatus	New status value: <ul style="list-style-type: none"><li>• STATUSIDLE = 0x00</li><li>• STATUSPROCESSING = 0x01</li><li>• STATUSREADING = 0x02</li><li>• STATUSREPFRESHING = 0x04</li><li>• STATUSREGENERATING = 0x08</li><li>• STATUSREADINGFINISHED = 0x10</li></ul>
<i>void</i> <b>HelpString</b> (BSTR szMsg)	Help String for status indicator.
<b>Parameters</b>	
szMsg	Help message.
<i>void</i> <b>ExtentsChanged</b> (double extMinX, double extMinY, double extMaxX, double extMaxY)	Fired when extents change internally (not when properties change).
<b>Parameters</b>	
extMinX, extMinY, extMaxX, extMaxY	New extents' values.
<i>void</i> <b>PageChanged</b> (short nNewPage)	Fired when page changes internally.
<b>Parameters</b>	
nNewPage	New page value.
<i>void</i> <b>RotateChanged</b> (short nNewRotate)	Fired when rotate values changes internally.

Event	Descriptions
<b>Parameters</b>	
nNewRotate	New rotate value.
<i>void</i> <b>FlipChanged</b> (short nNewFlip)	Fired when flip value changes internally.
<b>Parameters</b>	
nNewFlip	New flip value.
<i>void</i> <b>OnLMBButtonDown</b> (double xPos, double yPos)	Fired when left mouse button is pressed down.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnLMBButtonUp</b> (double xPos, double yPos)	Fired when left mouse button is released.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnLMBButtonDbIClk</b> (double xPos, double yPos)	Fired when left mouse button is double-clicked.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnRMBButtonDown</b> (double xPos, double yPos)	Fired when right mouse button is pressed down.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.

Event	Descriptions
<i>void</i> <b>OnRMBButtonUp</b> (double xPos, double yPos)	Fired when right mouse button is released.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnRMBButtonDbIClk</b> (double xPos, double yPos)	Fired when right mouse button is double-clicked.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnMMButtonDown</b> (double xPos, double yPos)	Fired when middle mouse button is pressed down.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnMMButtonUp</b> (double xPos, double yPos)	Fired when middle mouse button is released.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnMMButtonDbIClk</b> (double xPos, double yPos)	Fired when middle mouse button is double-clicked.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.

Event	Descriptions
<i>void</i> <b>OnMouseMove</b> (double xPos, double yPos)	Fired when mouse gets moved.
<b>Parameters</b>	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
<i>void</i> <b>OnNewDocument</b> (BSTR szFileName)	Fired when new file is loaded.
<b>Parameters</b>	
szFileName	New filename.
<i>void</i> <b>CrossProbeEvent</b> (shortNEventType)	Fired when cross-probe event occurred.
<b>Parameters</b>	
nEventType	<b>0</b> - Change in entity selections <b>1</b> - Zoom Selected command being invoked <b>2</b> - Show net connectivity command being invoked
<i>void</i> <b>BasefileHperlinkEvent</b> (shortNEventType, short nArg1, BSTR szArg2)	Fired when any of the events in the table below occur due to a hyperlink.

Parameter	nEventType	nArg1 (short)	nArg2 (BSTR)
Set Page	0	Page Index	"" (not used)
Set Page by title	1	0 (not used)	Title
Rotate	2	Degree (possible values: 0, 90, 180, 270)	"" (not used)

Flip	3	Flip setting: <b>0</b> - none <b>1</b> - Horizontal flip <b>2</b> - Vertical flip <b>3</b> - Both	"" (not used)
Zoom fit	4	0 (not used)	"" (not used)
Zoom by factor	5	Factor	"" (not used)
Set view	6	View index	"" (not used)
Set view by name	7	0 (not used)	View name

## AvMarkupX Control

### Properties

Property	Description
<i>long</i> <b>EntityColor</b>	Current EntityColor (COLORREFvalue)
<i>long</i> <b>PenStyle</b>	Current Pen Style
<i>long</i> <b>LineWidth</b>	Current line Width

### Methods

Method	Description
<i>void</i> <b>TestMarkup</b> (BSTRsz FileName)	Load specified file and enter Markup mode (for testing purposes).
<b>Parameters</b>	
szFileName	File to load.
<i>void</i> <b>Open()</b>	Opens Markup file.

---

<i>boolean</i> <b>OpenMarkup</b> ( BSTR sFileName, boolean bCloseAll)	Open specified markup file. <b>Return Value:</b> TRUE - success FALSE - otherwise
--	--

---

### Parameters

---

szFileName	Markup file name to open bCloseAll. True: Close all existing markup files. False: otherwise
------------	---

---

<i>boolean</i> <b>EnterMarkupmode</b> (OLE_HANDLE hVcetControl)	Enter Markup mode. <b>Return Value:</b> TRUE - success FALSE - otherwise
--	---

### Parameters

---

hVcetControl	Handle of the VCET control window.
--------------	------------------------------------

---

<i>long</i> <b>NotifyProc</b> (long msg, long wParam, long lParam)	Called by VCET control notify procedure. <b>Return Value:</b> Message specific.
---	---

### Parameters

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msg	Message to process.
wParam	Message WPARAM.
lParam	Message LPARAM.

---

<i>void</i> <b>Save()</b>	Save current Markup in file.
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<i>void</i> <b>SaveAs()</b>	Save current Markup under new name.
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<i>void</i> <b>DrawLine()</b>	Draw line entity.
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<i>void</i> <b>DrawArc()</b>	Draw arc entity.
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---

<i>void</i> <b>DrawBox()</b>	Draw box entity.
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<i>void</i> <b>DrawCircle()</b>	Draw Circle entity.
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<i>void</i> <b>DrawFilledBox()</b>	Draw filled box entity.
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<i>void</i> <b>DrawFilledCircle()</b>	Draw filled circle entity.
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<i>void</i> <b>DrawFilledPolygon()</b>	Draw filled polygon entity.
<i>void</i> <b>DrawLeader()</b>	Draw leader entity.
<i>void</i> <b>DrawFreeStyle()</b>	Draw free style entity.
<i>void</i> <b>DrawCloud()</b>	Draw cloud entity.
<i>void</i> <b>DrawText()</b>	Draw Text entity.
<i>void</i> <b>DrawHighlight()</b>	Draw highlight entity.
<i>void</i> <b>DrawNote()</b>	Draw Note entity.
<i>void</i> <b>DrawSymbol()</b>	Draw Symbol entity.
<i>void</i> <b>DrawOLE()</b>	Draw OLE object entity.
<i>boolean</i> <b>IsCurrentEntity</b> (long nEntId, long nSubType, long nFillType)	<b>Return Value:</b> Returns whether the specified entity is current or not.
<b>Parameters</b>	
nEntId	The entity ID.
nSubType	The sub type of the entity.
nFillType	Entity fill type.
<i>void</i> <b>ModifyLayers()</b>	Display Modify Markup Layers dialog.
<i>void</i> <b>ModifyFont()</b>	Display Modify Font dialog.
<i>void</i> <b>Undo()</b>	Undo last Markup operation.
<i>void</i> <b>Redo()</b>	Redo last cancelled Markup operation.
<i>boolean</i> <b>IsUndoAvailable()</b>	<b>Return Value:</b> Returns whether there is an operation to undo or not.
<i>boolean</i> <b>IsRedoAvailable()</b>	<b>Return Value:</b> Returns whether there is an operation to redo or not.

<i>boolean</i> <b>ExitMarkupMode()</b>	Exit Markup mode. <b>Return Value:</b> TRUE - exit successful FALSE - user cancelled operation
<i>long</i> <b>GetControlHandle()</b>	<b>Return Value:</b> Returns handle of the Markup control window.
<i>void</i> <b>MeasureDistance()</b>	Measure distance between two points.
<i>void</i> <b>MeasureCumDistance()</b>	Measure cumulative distance.
<i>void</i> <b>MeasureArea()</b>	Measure area.
<i>void</i> <b>Calibrate()</b>	Currently unsupported.
<i>void</i> <b>ZoomFit()</b>	Zoom to fit.
<i>void</i> <b>Rotate</b> (short nDegrees)	Rotate Markups.
<b>Parameters</b>	
nDegrees	Rotation value, can be only 0, 90, 180 or 270.
<i>void</i> <b>Flip</b> (short nFlag)	Flip Markups.
<b>Parameters</b>	
nFlag	Flipping value.
0	No flipping.
1	Flip horizontal.
2	Flip vertical.
3	Flip both.
<i>boolean</i> <b>ResetAction()</b>	Reset current action. <b>Return Value:</b> <b>TRUE</b> - if action was reset from adding entity to none <b>FALSE</b> - otherwise
<i>void</i> <b>ShowInfo()</b>	Show Markup information.
<i>void</i> <b>CreateNew()</b>	Open new Markup.



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*void* **SetFgBgColor**(boolean  
fBackgroundColor, long color)

**Parameters**

fBackgroundColor	TRUE/FALSE
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color	RGB color value.
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---

<i>void</i> <b>DeleteSelEntities()</b>	Delete selected Markup entities.
--	----------------------------------

---

<i>boolean</i> <b>CopyToClipboard()</b>	Copy selected Markup entities to clipboard. <b>Return Value:</b> <b>TRUE</b> - if action was successful <b>FALSE</b> - otherwise
---	---

---

<i>boolean</i> <b>PasteFromClipboard()</b>	Paste Markup entities from clipboard into current active Markup. <b>Return Value:</b> <b>TRUE</b> - if action was successful <b>FALSE</b> - otherwise
--	---

---

<i>void</i> <b>OnMarkupConsolidate()</b>	Generate consolidated Markup from current loaded Markups.
--	--

---

<i>void</i> <b>OnModifyMarkupOnOff()</b>	Toggle - show/hide Markups.
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---

<i>long</i> <b>GetFillStyle()</b>	Get current fill style. <b>Return Value:</b> 0 - No fill 1 - Solid fill 2 - Transparent fill
-----------------------------------	--

---

<i>void</i> <b>SetFillStyle</b> (long nNewValue)	Set current fill style.
--	-------------------------

**Parameters**

nNewValue	0 - No fill 1 - Solid fill 2 - Transparent fill
-----------	---

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*long* **GetCtlSnapType()**

Get current snap type.

**Return Value:**

- 0x00000001 - MRK\_SNAPTO\_NONE
  - 0x00000002 - MRK\_SNAPTO\_VERTEX
  - 0x00000004 - MRK\_SNAPTO\_EDGE
  - 0x00000008 - MRK\_SNAPTO\_MIDEDGE
  - 0x00000010 - MRK\_SNAPTO\_ARCCENTER
  - 0x00000020 - MRK\_SNAPTO\_FACE
  - combination of all above snap types – MRK\_SNAPTO\_ALL
- 

*long* **SetCtlSnapType**(*long* dwSnapType)

Set current snap type.

**Parameters**

dwSnapType

Takes one of the following values:

- 0x00000001 - MRK\_SNAPTO\_NONE
  - 0x00000002 - MRK\_SNAPTO\_VERTEX
  - 0x00000004 - MRK\_SNAPTO\_EDGE
  - 0x00000008 - MRK\_SNAPTO\_MIDEDGE
  - 0x00000010 - MRK\_SNAPTO\_ARCCENTER
  - 0x00000020 - MRK\_SNAPTO\_FACE
  - combination of all above snap types – MRK\_SNAPTO\_ALL
- 

*short* **GetAction()**

Get current Markup control action.

**Return Value:**

- 0 - MRKP\_ACTION\_NONE
  - 1 - MRKP\_ACTION\_ADD
  - 2 - MRKP\_ACTION\_DEL
  - 3 - MRKP\_ACTION\_COPY
  - 4 - MRKP\_ACTION\_EDIT
  - 5 - MRKP\_ACTION\_MOVE
  - 6 - MRKP\_ACTION\_SEL
  - 7 - MRKP\_ACTION\_HYBRID
- 

*void* **SetAction**(*short* nAction)

Set current Markup control action.

---

**Parameters***nAction*

Takes one of the following values:

- 0 - MRKP\_ACTION\_NONE
- 1 - MRKP\_ACTION\_ADD
- 2 - MRKP\_ACTION\_DEL
- 3 - MRKP\_ACTION\_COPY
- 4 - MRKP\_ACTION\_EDIT
- 5 - MRKP\_ACTION\_MOVE
- 6 - MRKP\_ACTION\_SEL
- 7 - MRKP\_ACTION\_HYBRID

---

<i>void</i> <b>Draw3DVertexCoord()</b>	Draw 3d vertex coordinates entity.
<i>void</i> <b>Draw3DDistance()</b>	Draw 3D measurement distance entity.
<i>void</i> <b>Draw3DArc()</b>	Draw 3D measurement arc entity.
<i>void</i> <b>Draw3DAngle()</b>	Drawing 3D measurement angle entity.
<i>void</i> <b>EditText()</b>	Edit a text entity in the currently opened Markups.
<i>void</i> <b>EditNote()</b>	Edit a note entity in the currently opened Markups.
<i>void</i> <b>EditDimensions()</b>	Edit a 3D dimension entity (including distance, arc, angle and vertex coordinates) in the currently opened Markup.
<i>void</i> <b>HideDimensions()</b>	Hide all 3D dimension entities in the currently opened Markups.
<i>void</i> <b>DeleteDimensions()</b>	Delete all 3D dimension entities in the currently opened Markups.
<i>boolean</i> <b>IsThisEntityAvailable</b> (short <i>nEntityID</i> )	Determines if the given entity is available. <b>Return Value:</b> <b>TRUE</b> - if entity is available <b>FALSE</b> - otherwise

---

**Parameters***nEntityID*

The entity ID.

---

*boolean* **IsThisEntityType**  
**Available** (short nEntityType)

Determines if any entity of the specified type actually exists in the currently opened Markups.  
**Return Value:**  
**TRUE** - if there is at least one entity of this type  
**FALSE** - otherwise

#### Parameters

nEntityType	The entity type.
-------------	------------------

---

*boolean* **IsThisEntityTypeSelected**  
(short nEntityType)

Determines if any entity of the specified type is selected in the currently opened Markups.  
**Return Value:**  
**TRUE** - if at least one entity is selected  
**FALSE** - otherwise

#### Parameters

nEntityType	The entity type.
-------------	------------------

---

*boolean* **IsThisEntityType**  
**Hidden** (short nEntityType)

Determines if any entity of the specified type is hidden in the currently opened Markups.  
**Return Value:**  
**TRUE** - if at least one entity is hidden  
**FALSE** - otherwise

#### Parameters

nEntityType	The entity type.
-------------	------------------

---

*long* **GetEntityPageIndex**(long handle)

Get the page index to which the Markup entity belongs to.  
**Return Value:**  
0 based page index.

#### Parameters

handle	The entity handle
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---

*boolean* **IsEntityEditable**(long handle)

Determine if the given entity is editable.  
**Return Value:**  
**TRUE** - if the entity is editable  
**FALSE** - otherwise

**Parameters**

handle	The entity handle.
--------	--------------------

<i>void</i> <b>EditEntity</b> (long handle)	Edit the given entity.
---	------------------------

**Parameters**

handle	The entity handle.
--------	--------------------

<i>short</i> <b>GetEntityLineStyle</b> (long handle)	Get the line style of the given entity.
--	---

**Return Value:**

- 0 - MRK\_PENSTYLE\_SOLID
- 1 - MRK\_PENSTYLE\_DASH
- 2 - MRK\_PENSTYLE\_DOT
- 3 - MRK\_PENSTYLE\_DASHDOT
- 4 - MRK\_PENSTYLE\_DASHDOTDOT
- 5 - MRK\_PENSTYLE\_HOLLOW
- 6 - MRK\_PENSTYLE\_ARC
- 7 - MRK\_PENSTYLE\_TRIANGLE

**Parameters**

handle	The entity handle.
--------	--------------------

<i>short</i> <b>GetEntityLineWidth</b> (long handle)	Get the line width of the given entity.
--	---

**Return Value:**

The line width in pixels.

**Parameters**

handle	The entity handle.
--------	--------------------

<i>long</i> <b>GetSelCount</b> ()	Get the number of the selected entities in the currently opened Markups.
-----------------------------------	--

**Return Value:**

The number of the selected Markup entities.

<i>void</i> <b>RotateRelative</b> (short nDegrees)	Rotate markup control together with base file
--	---

**Parameters**

nDegrees	Rotation angle in degree, can be only 0, 90, 180, 270.
----------	--

<i>short</i> <b>IsThisMarkupVisible</b> (long nMrkIndex)	Check if the given markup is visible. <b>Return Value:</b> TRUE if the given markup is visible. FALSE otherwise.
<b>Parameters</b>	
nMrkIndex	The markup index
<i>short</i> <b>ShowThisMarkup</b> (long nMrkIndex, boolean bShow)	Show or hide the given markup.
<b>Parameters</b>	
nMrkIndex	The markup index
bShow	TRUE if show the markup, otherwise FALSE.

# AvPrintX Control

## Properties

No properties.

## Methods

Method	Descriptions
<i>void</i> <b>PrintIt</b> (OLE_HANDLE hVcetControl,OLE_HANDLE hMarkupControl, boolean bPrintDirect)	Print file along with Markups.
<b>Parameters</b>	
hVcetControl	Handle of the VCET control window (must not be NULL)
hMarkupControl	Handle of the Markup control window (can be NULL).
bPrintDirect	Flag that indicates whether to show a dialog to user or not.

Method	Descriptions
<i>void</i> <b>PrintFile</b> (BSTR szFileName,boolean bPrintDirect)	Prints specified file.
<b>Parameters</b>	
szFileName	Filename to print.
bDirectPrint	Flag indicating whether or not to show a dialog to user.
<i>void</i> <b>PrintPreview</b> (OLE_HANDLE hVcetControl, OLE_HANDLE hMarkupControl, boolean bPreviewDirect, boolean bWantFrame)	Enter Print Preview mode.
<b>Parameters</b>	
hVcetControl	Handle of the VCET control window (must not be NULL).
hMarkupControl	Handle of the Markup control window (must not be NULL).
bPreviewDirect	Flag that indicates whether to show a dialog to user or not bWantFrame - flag for preview with frame or not.
<i>void</i> <b>PrintPreviewFile</b> (BSTR szFileName, boolean bPreviewDirect, boolean bWantFrame)	Enter Print Preview mode for specified file.
<b>Parameters</b>	
szFileName	Filename to preview.
bPreviewDirect	Flag that indicates whether to show a dialog to user.
bWantFrame	Flag for indicating preview with frame.
<i>void</i> <b>PreviewPrint()</b>	In Print Preview window - send Print command.

Method	Descriptions
<i>void</i> <b>PreviewNextPage()</b>	In Print Preview window - go to next page.
<i>void</i> <b>PreviewPrevPage()</b>	In Print Preview window - go to previous page.
<i>void</i> <b>PreviewNumPage()</b>	In Print Preview window - switch between 1 and 2 page display.
<i>void</i> <b>PreviewZoomIn()</b>	In Print Preview window - zoom in.
<i>void</i> <b>PreviewZoomOut()</b>	In Print Preview window - zoom out.
<i>void</i> <b>PreviewClose()</b>	Close Print Preview window.
<i>void</i> <b>SetPrintPageOrientation</b> (boolean bLandscape)	Set page orientation for printing.
<b>Parameters</b>	
bLandscape	True if print as landscape, otherwise as portrait.
<i>void</i> <b>EnablePrintOptions</b> (short nOption, boolean bEnable)	Enable/disable a print option.
<b>Parameters</b>	
nOption	Takes one of the following values: <b>0</b> - PRINTOPT_GENERAL <b>1</b> - PRINTOPT_HEADERSFOOTS <b>2</b> - PRINTOPT_WATERMARK <b>3</b> - PRINTOPT_MARGINS <b>4</b> - PRINTOPT_STAMPS <b>5</b> - PRINTOPT_PENSETTINGS <b>6</b> - PRINTOPT_PRINTTOFILE <b>7</b> - PRINTOPT_PRINTSETTINGS



## Events

Event	Description
<i>void</i> <b>EndPrintPreview()</b>	Fired when user closes Print Preview window.
<i>void</i> <b>EndPrint()</b>	Fired when finished printing.

## AutoVue CompareX Control

### Properties

Property	Descriptions
<i>BSTR</i> <b>File1</b>	First source filepath.
<i>BSTR</i> <b>File2</b>	Second source filepath.
<i>boolean</i> <b>ShowScrollBar</b>	Flag indicating whether or not to show Scrollbar.
<i>boolean</i> <b>ShowMainToolBar</b>	Flag indicating whether or not to show Main toolbar.
<i>boolean</i> <b>ShowAuxiToolBar</b>	Flag indicating whether or not to show Auxiliary toolbar.
<i>boolean</i> <b>ShowStatusBar</b>	Flag indicating whether or not to show Status bar.
<i>boolean</i> <b>EnablePopupMenu</b>	Flag indicating whether or not to enable Popup menu.
<i>OLE_COLOR</i> <b>CtlBgColor</b>	Background color.
<i>short</i> <b>Rotate</b>	Specifies current rotation value. Can be only 0, 90, 180, 270.
<i>short</i> <b>Flip</b>	<b>0</b> - No flipping <b>1</b> - Flip horizontal <b>2</b> - Flip vertical <b>3</b> - Flip both

Property	Descriptions
<i>short</i> <b>Page</b>	Specifies current page.
<i>short</i> <b>ZoomType</b>	<b>0</b> - Zoom fit width <b>1</b> - Zoom fit height <b>2</b> - Zoom fit both <b>3</b> - Zoom fit resolution <b>4</b> - Zoom by factor (Default 1) <b>5</b> - Zoom custom: The following 4 properties are used to determine the extents
<i>double</i> <b>ExtMinX</b>	Minimal X coordinate of extents.
<i>double</i> <b>ExtMinY</b>	Minimal Y coordinate of extents.
<i>double</i> <b>ExtMaxX</b>	Maximal X coordinate of extents.
<i>double</i> <b>ExtMaxY</b>	Maximal Y coordinate of extents.
<i>boolean</i> <b>ViewAdditions</b>	If <b>TRUE</b> , shows the entities that are in the second file but not in the first file.
<i>boolean</i> <b>ViewDeletion</b>	If <b>TRUE</b> , shows the entities that are in the first file but not in the second file.
<i>boolean</i> <b>ViewUnchanged</b>	If <b>TRUE</b> , shows the entities that are in both files.

## Methods

Method	Descriptions
<i>void</i> <b>ZoomFit()</b>	Zoom to fit.
<i>void</i> <b>ZoomPrevious()</b>	Undoes last zoom operation.
<i>void</i> <b>ZoomWidth()</b>	Zooms to fit width.
<i>void</i> <b>ZoomHeight()</b>	Zooms to fit height.
<i>void</i> <b>ZoomByFactor</b> (double factor)	Zooms by factor.

Method	Descriptions
<b>Parameters</b>	
factor	Zooming factor.
<i>void</i> <b>ZoomFullResolution()</b>	Displays rasters using full resolution, for other formats same as ZoomFit
<i>void</i> <b>Print</b> (boolean bDirectPrint)	Prints current document.
<b>Parameters</b>	
bDirectPrint	Flag indicating whether or not to show a dialog to user
<i>void</i> <b>PrintPreview</b> (boolean bDirectPrint)	Previews current document.
<b>Parameters</b>	
bDirectPreview	Flag indicating whether or not to show a dialog to user.
<i>void</i> <b>PageNext()</b>	Displays next page.
<i>void</i> <b>PagePrevious()</b>	Displays previous page.
<i>void</i> <b>PageSelect()</b>	Selects page number.
<i>void</i> <b>SetContrastLight()</b>	Sets the image contrast to be light, this only applies to raster files.
<i>void</i> <b>SetContrastNormal()</b>	Sets the image contrast to be normal, this only applies to raster files.
<i>void</i> <b>SetContrastDark()</b>	Sets the image contrast to be dark, this only applies to raster files.
<i>void</i> <b>SetContrastDarkest()</b>	Sets the image contrast to be darkest, this only applies to raster files.

Method	Descriptions
<i>void</i> <b>GetContrast()</b>	Returns the image contrast value. The value can be one of the following for the raster file: CONTRAST_LIGHT (-50) CONTRAST_MEDIUM (0) CONTRAST_DARK (66) CONTRAST_DARKER (100)
<i>void</i> <b>SetAntiAlias()</b>	Scales to grey, enhances the details of the raster file image that are viewed at less than 100% zoom.
<i>void</i> <b>InvertImage()</b>	Reverses the background and foreground colors of the raster file image.
<i>void</i> <b>ShowLayersDlg()</b>	Displays the Layer dialog.
<i>void</i> <b>ShowBlocksDlg()</b>	Displays the Blocks dialog.
<i>void</i> <b>ShowNamedViewsDlg()</b>	Displays the Named View dialog.
<i>void</i> <b>ShowXRefDlg()</b>	Displays the Xref dialog.

## Events

Event	Description
<i>void</i> <b>StatusChanged</b> (short nNewStatus)	Fired when status changes.
<b>Parameters</b>  nNewStatus	
	<b>New status value:</b> STATUSIDLE = 0x00 STATUSPROCESSING = 0x01 STATUSREADING = 0x02 STATUSREFRESHING = 0x04 STATUSREGENERATING = 0x08 STATUSREADINGFINISHED = 0x10
<i>void</i> <b>HelpString</b> (BSTR szMsg)	Help String for status indicator

**Parameters**

<code>szMsg</code>	Help message
<code>void ExtentsChanged</code> (double <code>extMinX</code> , double <code>extMinY</code> , double <code>extMaxX</code> , double <code>extMaxY</code> )	Fired when extents change internally (not when properties change).

**Parameters**

<code>extMinX</code> , <code>extMinY</code> , <code>extMaxX</code> , <code>extMaxY</code>	New extents' values.
<code>void PageChanged</code> (short <code>nNewPage</code> )	Fired when page changes internally.

**Parameters**

<code>nNewPage</code>	New page value.
<code>void RotateChanged</code> (short <code>nNewRotate</code> )	Fired when rotate value changes internally.

**Parameters**

<code>nNewRotate</code>	New rotate value.
<code>void FlipChanged</code> (short <code>nNewFlip</code> )	Fired when flip value changes internally.

**Parameters**

<code>nNewFlip</code>	New flip value.
-----------------------	-----------------

## Integration: AutoVue and "Visual Basic" Applications

All the integration methods available through "C" are also available under Visual Basic. Visual Basic provides hooks to call DLL functions and create "C"-like data structures. The easiest way to integrate AutoVue would be through OLE-Automation. This has several advantages, to wit:

- Access to a high level API
- The code that is produced can be used, with little or no modification, in applications that support VBA (Visual Basic for Applications). VBA is a

programming language available in most Microsoft Office products (Word, Excel, Access etc.)

- Language is easy to use and extensible

#### **OLE Automation Example:**

```
; Declare the OLE Automation Object
Dim OleObj As Object
; Function: Create the Ole automation object. Must be called once when
your program starts up.
Sub LoadOleObj()
    ' Create the OLE Automation Object
    Set OleObj = CreateObject("AutoVue.Application")
End Sub
; Function: Destroy the Ole automation object.
; Must be called once when your program exits. Performs necessary
; cleanups.
Sub UnloadOleObj()
    If (IsObject(OleObj)) Then
        ' Close the window
        OleObj.Execute ("CHILD CLOSE")
    End If
    ' Clean up
    Set OleObj = Nothing
End Sub
; Function: This sample function accessed
; to OLE Automation object and performs several operations.
; You should put in your own code here.
Sub ExecuteOleObj()
    If (IsObject(OleObj)) Then
        ' Copen file
        'OleObj.Execute ("FILE OPEN C:\AV19.1\samples\Desktop-
Office\Word.doc")
        OleObj.Execute ("FILE OPEN ""C:\AV19.1\samples\3d\3D
Compare\Component_V1\Component.SLDASM""")
        OleObj.Execute ("COMPARE ""C:\AV19.1\samples\3d\3D
Compare\Component_V2\Component.SLDASM""")

        ' Display window: The Application is, by default, hidden
        OleObj.Execute ("WINDOW SHOW")
        'OleObj.Execute ("CHILD SHOW")
        ' Display another file
```

```
'OleObj.Execute ("FILE OPEN c:\autoexec.bat")
' Print the file
' OleObj.Execute ("PRINT")
OleObj.Execute ("COMPARE ""C:\AV19.1\samples\3d\3D
Compare\Component_V2\Component.SLDASM""")
End If
End Sub
```





# Format Support

To see the latest list of file formats supported by the AutoVue family of products, please visit our website at: <http://www.cimmetry.com>. A list of supported file formats is also available in PDF format with your AutoVue installation.



# Utilities

In addition to the APIs discussed in the Integration chapter, additional tools are provided with AutoVue. These include:

## Full Text Extraction

This utility allows users to extract text information from virtually any type of document, whether it be CAD, vector, text, etc. This utility is perfect for extracting text from a file and providing textual information to a search engine for indexing. It also eliminates duplicates. For example, users can fully text index AutoCAD or MicroStation drawings in a document management system. Further information on this tool can be found in the Docs directory of your AutoVue CD.

## Using the FullText Extraction Utility

- 1 From the **Tools** menu in AutoVue, select **Auto Text Extraction**. Alternatively, open the file **Outtext.exe** located in the directory **C:\Program Files\lav\lavwin**.  
The **Automatic Text Extraction** dialog appears.
- 2 In the **From** text box, enter the path and name of the file from which the text is to be extracted.
- 3 In the **To** text box, enter the path and name of the file to which the discovered text is to be copied.  
File extensions include **.txt** and **.out**. The default is text.out located in the temp directory. If the file entered does not exist, it will be created for you.
- 4 Click **Extract**.  
Text found in the **From** file are listed under **Contents** in the **Automatic Text Extraction** dialog.

## Ftype

This utility provides the file type of a file. For example, provided the filename doc1.doc, Ftype lets users determine that the file is a Microsoft Word document. This tool is useful for implementing batch check-in of files into a document management system or for providing MIME type information to a web server. Further information on this tool can be found in the Docs directory of your AutoVue CD.

## CAD Information Extraction

This utility allows users to extract XRef information from a CAD file. This is useful for batch importing AutoCAD, MicroStation and various other types of CAD files into a document management system. To access this tool, select **CAD/Doc Text Extraction** from the **Tool** menu.

Examples of integrations using these tools and APIs can be found in the Integrat directory of the AutoVue CD.

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