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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CONTENTS

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, or XP
- A hard disk with at least 300 MB of hard disk space
- Windows-supported pointing device such as a trackball or mouse

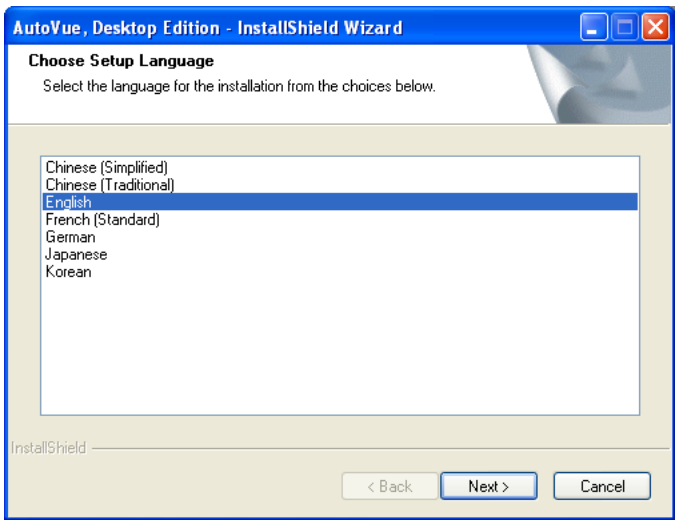
  Note The memory requirement is dependent on the size and complexity of files you are trying to view with AutoVue.

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.

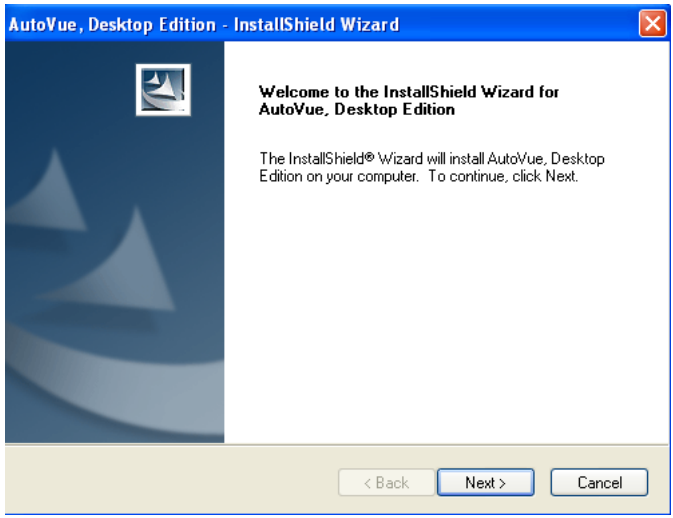
2 If you are downloading AutoVue from a download site, double-click the executable to install AutoVue.

3 The **InstallShield Wizard** dialog appears.

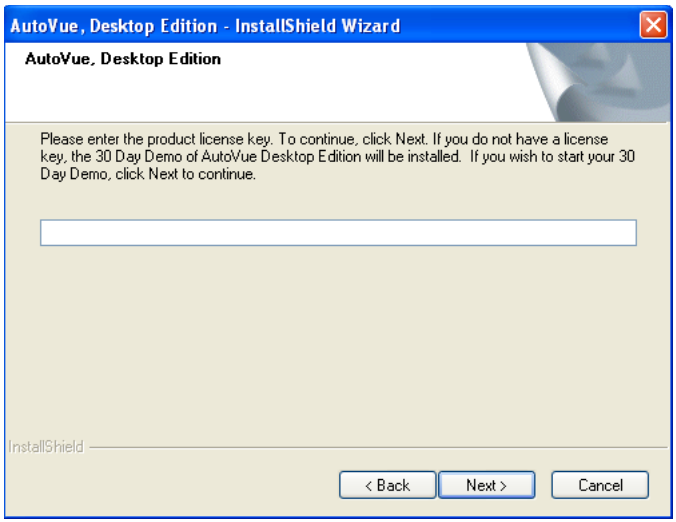


4 Select the language of AutoVue you want to install, then click **Next**.

The **AutoVue Welcome** dialog appears.

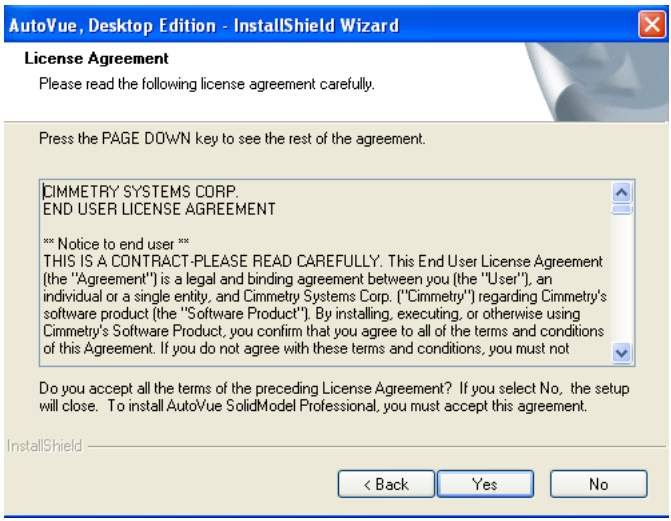


5 Read the dialog, then click **Next**.
The **License Key** dialog appears.

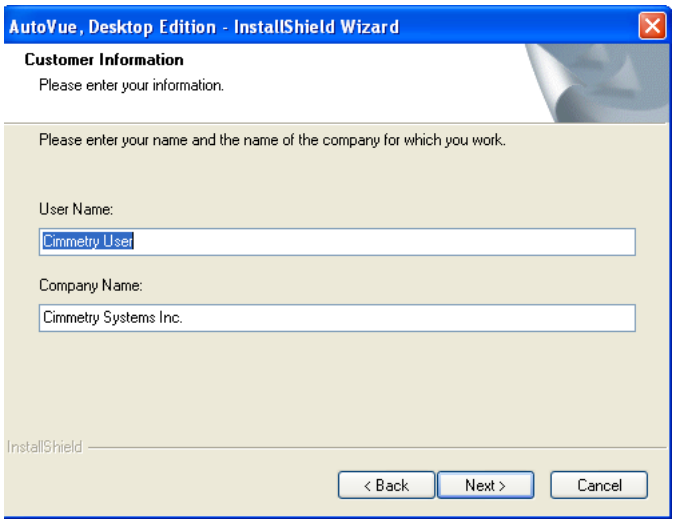


6 Enter the **License Key** for the AutoVue product you are installing, then click **Next**.

The **License Agreement** dialog appears.

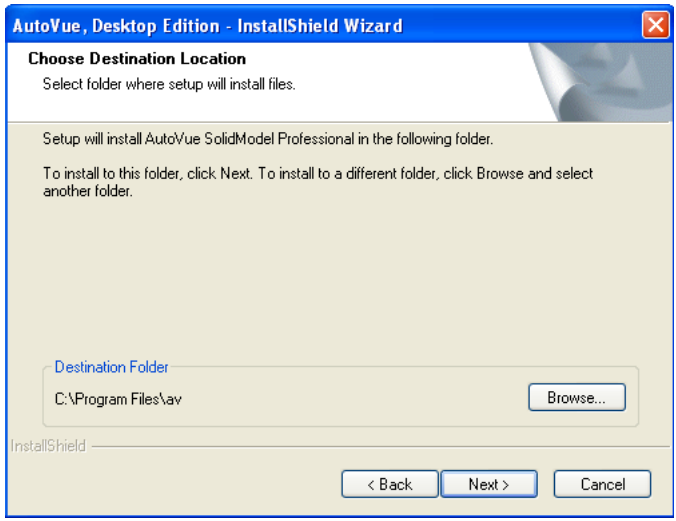


7 Read the **License Agreement**, then click **Yes** to accept terms.
The **Customer Information** dialog appears.



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

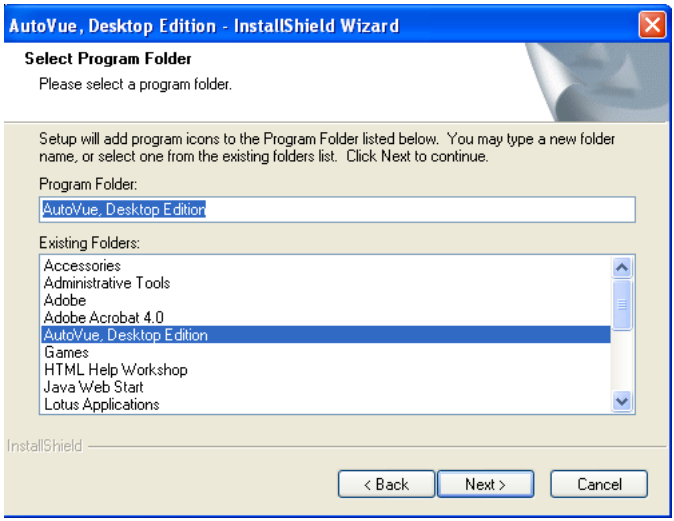
The **Destination Location** dialog appears.



9 The default directory where AutoVue will be installed is **C:\Program Files\av**. To accept this location, click **Next**.

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

The **Select Program Folder** dialog appears.



10 Enter a **Program Folder** that will contain AutoVue program icons or except Default, then click **Next**.
A dialog appears informing you that the setup program is performing the requested operations.

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

Where:

<<<LICENSE KEY>>>	Should be set to the actual license key used.
<<<INSTALLDIR>>>	Should be the directory where AutoVue is to be installed.
<<<COMPANY>>>	Should be the company name entered.

4 The **setup.iss** is created in the **C:\Windows** directory.

5 To run the silent install on the client machine, type the following line at the command prompt:
avsetup.exe -a -s -f1C:\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.

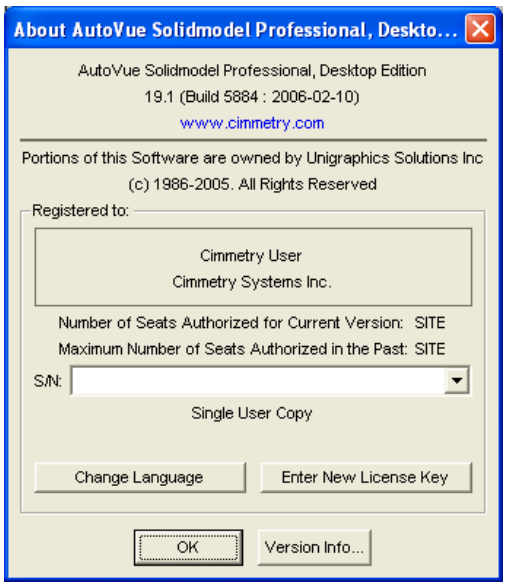
From the **Help About** dialog, you can see information about your current installation of AutoVue. Information such as the variation of AutoVue you are using, the version, the build number and the current language that AutoVue is running is displayed. You can also enter a new license key and/or change 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

1 Select **Help > About** from the AutoVue main menu.
The **About...** dialog appears.



2 Click **Change Language**.
The **Language Change** dialog appears.

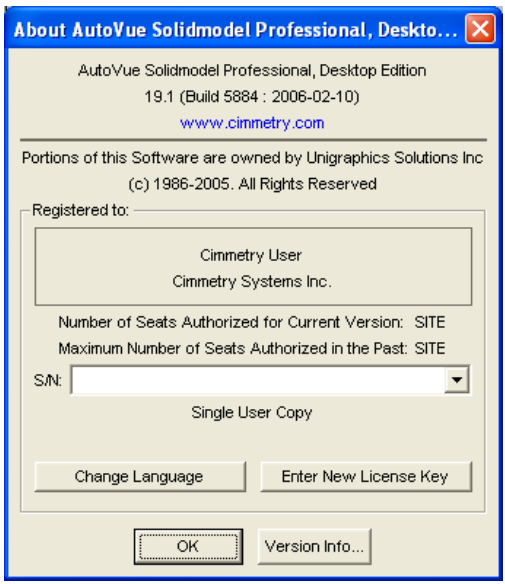
3 From the **New Language** drop-down list, select the language you want to change to.
4 Click **OK**.
5 Click **OK** in the **About...** dialog.
6 Restart AutoVue for the new localization to take effect.

Entering a New License Key

You can specify a new license key from the **Help > About** dialog. If you have a **DEMO** installed and you would like to switch to a fully functional license or if you would like to switch from one product variation to another, you can do so from this dialog.

Note Contact Cimmetry Systems for your licensing requirements.

1 Select **Help > About** from the AutoVue main menu.
The **About...** dialog appears.



2 Click **Enter New License Key**.
The **License Key** dialog appears.

3 Enter the **New License Key**.
4 Click **OK**.

5 Click **OK** in the **About...** dialog.

6 Restart AutoVue for the new license key to take effect.

Note If you are switching from a 2D/Office variation of AutoVue to a 3D/EDA variation, you will be prompted to re-run the installer for AutoVue. Rerun the installer and select **Modify**. AutoVue will install all required components as per your license.

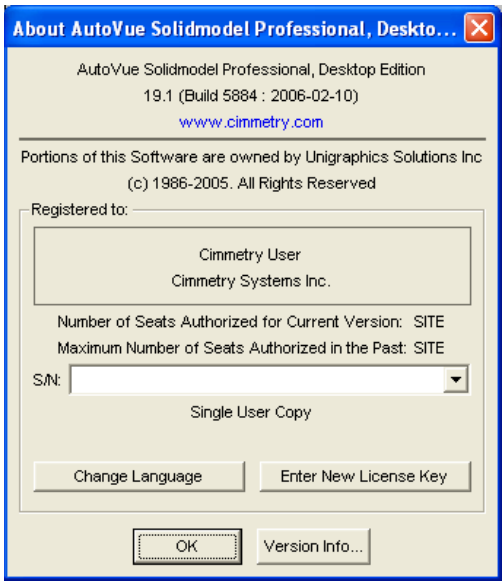
Note If your evaluation or Demo license expires, you will not be able to startup AutoVue. When you try to startup AutoVue, it will prompt you for a license key. Enter a license key in order to be able to continue working with AutoVue.

Viewing and Exporting File Versions Information

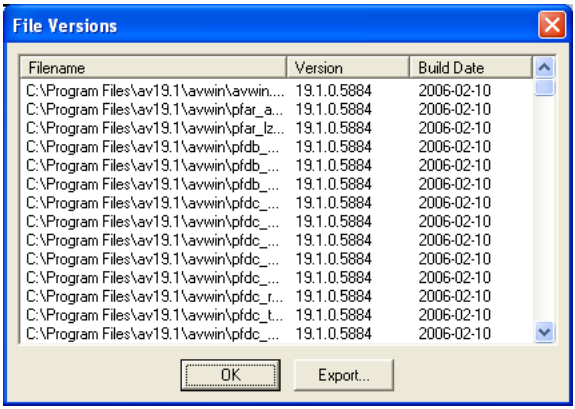
With AutoVue you can view the version, build number and date of the decoder dll files, as well as export the files into a text file.

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 are finished 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**.
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 Enter the Command Line options after the file provided for you in the **Open** text box.
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 *should* be included in the command.
(parentheses)	Are required syntactical elements and *should* be included in the command.
Bold	Introduces a literal expression and must be entered exactly as shown.
Italics	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: **avwin [filename1][filename2]** 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: **avwin -c inifilename**
{**-lastfile**=fname}or {**/lastfile**=fname}	Writes the name of the last file viewed into the file name.

{**-hide**}or {**/hide**}	Does not display the AutoVue user interface on the desktop.
{**-maximizes**}or {**/maximizes**}	Displays a maximized AutoVue user interface on the desktop.
{**-minimizes**} {**/minimizes**}	Displays a minimized AutoVue user interface on the desktop.
{**-p** [nnn-mmm] *filename*} or {**/p** [nnn-mmm] *filename*}	Prints the page range of the specified file from nnn to mmm. **avwin -p [pagerange] filename** Specifying the **-p** 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. **Example**: **avwin -p [2-5] myfile.doc** would print pages 2 to 5 both inclusive of the file "**myfile.doc**".
{**-restore**}{**/restore**}	Displays the AutoVue user interface on the desktop at the original size.
{**-s** *scriptfile*} or {**/s** *scriptfile*}	Specifies a script file to run on startup: Automatically executes the specified script file on startup. **Example**: **avwin -s scriptfile**
{**-search**}{**/search**}	The **/search** 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. **avwin filename -search searchstring**

{**-f** *filename*} or {**/f** *filename*}	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.

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 or Windows NT 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 Locate the section heading corresponding to the changes you want to make.
Example: [Markup Options]
4 Modify the command line if it already exists or add the new command line.
Example: INFO_USER=Name of Author
5 Save the changes to **avwin2.ini** and close the file.
6 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

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 1 if you wish to print document even if the PDF file is print-protected.	0
PDFCACHELEVEL= <None|Low|Medium|High>	Specify the level of caching to be used for PDF font glyphs. **Low** - 2 faces, 3 sizes per face, 200KB maximum memory size **Medium** - 4 faces, 6 sizes per face, 800KB maximum memory size **High** - 8 faces, 6 sizes per face, 1.5MB maximum memory size	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
USEEXCHANGE=<0|1>	**0** - Uses AutoVue's built-in PDF viewer. **1** - If Adobe Exchange is installed, then AutoVue will use Exchange's viewer to display PDF files.	1

Note Below option must be set in **pdffont.map**. This does not go into **avwin.ini**

[Options]

UseFreeTypeForSystem TTFRendering	**IMPORTANT:** Set this option in the file pdffont.map. Set to 1 in order to force the use of free type library for TTF system rendering.	

AutoCAD Options

Configure options for ACAD file.

[Options].

Parameter	Description	Default
ACAD_FAST3D=<1|0>	Set to **1** to improve rendering speed of AutoCAD 3D. **Note** Setting this option to 1 means that layers will not be listed and AutoVue streams all meshes & extrusions in one body. Set to **0** will mean slower rendering of AutoCAD 3D. However, layer information is listed and each mesh is streamed in its own entity.	1
ACAD2004RGBCOLOR=<1|0>	If **1**, use RGB color. If **0**, use AIC (AutoCAD Indexed Color). **Note** This is for AutoCAD files, version 2004 and later.	1
ACADDEFAULTFONT=fontname	This font is substituted if an 8-bit font is not located for AutoCAD drawings.	simplex.shx
ACADDEFAULTBIGFONT= bigfontname	This font is substituted if a 16-bit font is not located	bigfont.shx

Parameter	Description	Default
DRAWORDER=<0|1>	If **1**, draws sorted (ordered) entities from the last save of the DWG file, otherwise, entities are drawn in the order they were first created.	1
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]. • For no line weight scaling, set this option to 25. • For thicker lines, set this option above 25. • For thinner lines, set this option below 25.	25
SHOWALLLAYERS=<0|1>	If **1**, 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 **1**, use RGB color. If **0**, use AIC (AutoVue Indexed Color). **Note** Should be set to **0** to be able to use pen settings for printing.	1

Parameter	Description	Default
DWFCOLORTBL	Option is applicable only when **DWFRGBCOLOR=0**. Specify the path and the name to a color table. Specified color table overrides the palette stored in the DWF file. If no external palette is specified, the default palette stored in the DWF file will be used. There are two default palettes depending on the DWF file version: • Autocad palette for file versions 3.6 and earlier. • A second palette for file versions later than 3.6. Below are some of the common colors and their corresponding pen numbers: 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 **1**, the Inventor decoder draws the background sheet. Otherwise, the decoder draws the outline only. This option applies to Autodesk Inventor 2D files.	1

Parameter	Description	Default
AILOADNATIVE2D=<0|1>	If **1**, 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 **1** if you do not want PCB boards displayed.	0
CADENCE_CPMONLY= <0|1>	Set to **1** if you want only files listed in the CPM file displayed.	0

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 **Prtfont.map** in the program directory.

CATIA 4 Options

Configure options for CATIA 4 files.

[Options]

Parameter	Description	Default
CATIAProjectFile	Specify the full path to the CATIA project file. **Note** 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
CATIAIgnoreProjectionLayer=<0/1>	When set to **1** supports projected view visibility through draft view layer settings for CATIA 4 drawings.	0

Note Mapping for CATIA 4 fonts is specified in file CATIAv4.fontmap located in the **<install directory>\avwin\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 **0** 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 **1** for this option to take effect.	1
Catia5BuildInvisibleCGMBodies=<0|1>	Set to **1** if you wish to process and display invisible BREP bodies.	1

CGM Options

Configure options for CGM files.

[Options]

Parameter	Description	Default
SHOWBACKGROUND=<0|1>	If **1**, the background of CGM files is displayed with color. Set option to **0** 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 **1**, displays an Excel file in print preview mode, otherwise, displays as a regular spreadsheet.	0
DOCVIEWSHOWHEADERS=<0|1>	Set to **1** to display headers when **DOCVIEW = 1**.	0
SSHIDESCROLLBARS=<0|1>	Set to **1** to disable Dundas 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 **1** if data is in incremental mode.	0
NUMDECIMALS=*num*	Enter the number of decimals. Specify a value can be between 1 and 6.	3
NUMDIGITS=*num*	Enter the number of digits. Specify a value can be between 1 and 6.	2
TOOLFILEPATH=C:\temp\default.too	Specifies the path to the aperture list file.	

Parameter	Description	Default
TOOLFILETYPE=<0|1|2|3|4|5>	Specifies the type of aperture list file. **0** = CSI **1** = Orcad **2** = ECAM **3** = Protel **4** = Artwork **5** = Allegro **6** = Visula **7** = Autotrax	0
TRAILINGZEROS<0|1>	Enter **1** if coordinate data is in trailing zeros format.	0
UNITS=<1|2>	Specifies the unit: **1** is for inches; **2** is for mm.	1
TOOL_UNIT	Specify the unit for the tool and aperture file if unit is different from the Gerber file. **-1** = Unspecified file unit. Aperture file will adopt the same unit as the Gerber file. **1** = inches **2** = millimeters **12** = mil	-1

HPGL/HPGL2 Options

Configure options for HPGL/HPGL2 files.

[Options]

Parameter	Description	Default
CODEPAGE=*num*	Forces text display of a specific language. Specify the codepage to use for hpgl files. E.g.: Set **CODEPAGE = 932** to display Japanese text in HPGL files.	

Parameter	Description	Default
HPBACKGROUND=<0|1>	**0** = Do not draw page background **1** = draw page (applies to HPGL/HPGL2 files)	0
HPGLCOLORTBL=*path/hpglcol.tbl*	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. Note that this option is used only if the file does not explicitly specify pen colors with the HPGL PC command.	The file **Hpglcol.tbl** in the program directory

IGES Options

Configure options for IGES files.

[Options]

Parameter	Description	Default
IGESLoadSubFigureDefinitions=<0|1>	Set to **1** 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 **1**, JPEG images are quantized to 256 colors for quicker display. If **0**, true colors are used. Option applies to.jpg files.	1

JPEG 2000 Options

Configure options for JPEG 2000 files.

[Options]

Parameter	Description	Default
J2KRESOLUTION	Set to **HIGH** to display with a high resolution. This could cause a decrease in performance. Other values: **LOW**, **MEDIUM**, **DYNAMIC**. **Note**: This only applies to JPEG2000 files.	Dynamic

ME10/ME30 Options

Configure options for ME10/ME30 files.

[Options]

Parameter	Description	Default
ME10CONSTRUCTION GEOM=<0|1>	Set to **1** to toggle on construction entities for ME10 files.	1

Parameter	Description	Default
ME10MULTIBYTE=<0|1>	This option sets the priority for glyph search in Multibyte/ Singlebyte fonts. • Set this option to **0** if the file does not contain any Multibyte fonts (Far Eastern Languages). • Set this option to **1** if the file contains a mixture of Singlebyte/ Multibyte fonts.	0
ME10RGBCOLOR=<0|1>	Determine the mode of colors for ME10 files. If **1**, use RGB colors. If **0**, use AIC (AutoVue Indexed Color). **Note** When set to **0**, you can customize the file **me10col.tbl** to get the desired pen settings.	1
ME10SHOWVERTEX=<0|1>	Set to **1** to toggle on vertices for ME10 files.	0
MEFONTMAP=*fullpath_to_*mefont.map	Specifies the full path to the ME10 / ME30 font map file. This file maps ME10 /ME30 fonts to TrueType fonts. Note that native ME10 / ME30 fonts are supported. This options is used only when the native fonts are unavailable.	The file **mefont.map** in the program directory

MicroStation Drawing Options

Configure options for MicroStation drawings.

[Options]

Parameter	Description	Default
DGN_FAST3D	Option applies to MicroStation 8 files. Set to **1** to improve rendering speed of MicroStation 8 files. Note that setting this option to 1 means that layers will not be listed and AutoVue streams all meshes & extrusions in one body. Set to **0** will mean slower rendering of MicroStation 8 files. However, layer information is listed and each mesh is streamed in its own entity.	1
DGN8LSTYLERSC=*fullpath_* to_style.rsc	Specify the full path to a MicroStation linestyle resource file that will be used to render linestyles and multi-line patterns.	The file **lstyle.rsc** in the program directory.

Parameter	Description	Default
DGN8XREFUNITS	Option applies to MicroStation version 8 files with AutoCAD XREFs. 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. **Example**: DGN8XREFUNITS = meters	
DGNARABICFONTS=<0|1>	Support for Arabic fonts for MicroStation. Set to **1** to specify right-to-left drawing.	
DGNCOLORTBL=*fullpath_to_*color.tbl	Option applies to MicroStation 7 files. 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.	The file **color.tbl** in the program directory.

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
DGNFILLAPPLYONLYTO LINES=<0|1>	Option applies to MicroStation 7 files. If set to **1** then the Fill option only applies to lines. Applies to MicroStation drawings.	0
DGNFONTMAP=*fullpath_* 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.	The file **dgnfont.map** in the program directory.
DGNFONTRSC=*fullpath_to_ font.rsc;full2. . .*	Specify a semi-colon separated list of the full paths to fonts for the MicroStation font RSC files.	The file **font.rsc** in the program directory.
DGNIRASB=<0|1>	If **0**, 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=*fullpath*_to_style.rsc	Option applies to MicroStation 7 files. Specify the full path to a MicroStation linestyle resource file that will be used to render linestyles and multi-line patterns. Option applies to MicroStation 7 files.	The file **lstyle.rsc** in the program directory.
DGNREFCYCLECHECK=<0|1>	Option applies to MicroStation 8 files and corresponds to MicroStation v8.5 environment variable MS_REF_CYCLECHECK. When set to **1**, 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 **0**, all references will be displayed, as long as nesting depth permits.	1
SHOWZEROLENGTHLINES=<0|1>	Option applies to MicroStation 7 files. If **1**, 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. **1** = inches **2** = millimeters	1
NCD_TRAILINGZEROS OMITTED	Option applies to NC-Drill format. **0** = Coordinate data is trailing zero omitted **1** = Coordinate data is leading zero omitted **2** = Coordinate data is all digit present **3** = Coordinate data is explicit decimal point	0
NCD_COMMENTSYMBOL	Option applies to NC-Drill format. Specify the comment symbol. **Default**: NCD_COMMETSYMBOL=;	
NCD_INCREMENTALMODE	Option applies to NC-Drill format. Set to 1 if data is in incremental mode. **0** = absolute mode **1** = 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. Changing this value will affect the x, y coordinate.	2

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 **Default**: empty path	
NCD_TOOLFILEPATH	Complete path for Tool file. **Default**: empty path	

Orcad Layout Options

Configure options for OrCAD Layout files.

[ECAD]

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

Postscript Options

Configure options for Postscript files.

[Options]

Parameter	Description	Default
PSMINDPI=nDPI	Indicates a numeric value for the minimum resolution (in dpi) used for rendering PostScript files. Normally, the resolution is calculated based on that of the output device, however, this option can allow you to increase the resolution (e.g., details seem jagged on the output). If **0**, the greater resolution of the two is used.	0

Parameter	Description	Default
PSWidth= PSHeight=	For Postscript files that do not have a page size, specify the width and height that AutoVue should use to completely display the file. For example, the below settings specify that the page size is 11.0 X 8.5 inches. **[Options]** PSWidth = 11.0 PSHeight = 8.5	

Pro/ENGINEER Options

Configure options for Pro/ENGINEER files.

[Options]

Parameter	Description	Default
ProE2DLoadSavedDisplayLists=<0|1>	If set to **1**, the display list will be loaded instead of generating the 2D drawing from the 3D Model. If the display list does not exist, the 2D drawing will be generated from the 3D Model. **Note** Option applies toPro/Engineer 2D files.	1
ProE2DLoadPicture=<0|1>	Set to **1** 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
ProECosmeticsDataOneNode=<0|1>	Set to **1** to enable collapsing of all datum and cosmetic features from one part/subassembly into one node.	1

Parameter	Description	Default
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.	
ProELoadPMIData=<0|1>	Set to **0** to disable display of PMI entities.	1
ProEMassPropUseMesh=<0|1>	Set to **1** to compute mass properties (volume, surface area, mass,...) using the mesh model. **Default 0**, compute mass properties using the BRep model.	0
ProEPMIDIMTOLDisplay=<0/1>	Set to **1** to display tolerance for dimension entities for Pro/ENGINEER 3D files.	0

SolidWorks Options

Configure options for SolidWorks files.

[Options]

Parameter	Description	Default
SWBUILDMESHTOPOLOGY	Set to **0** if you do not want to build the topology in mesh mode. Applies to Solidworks 3D Files.	1
SWSYMBOLFILE	Specifies the path to the symbols file. Applies only to SolidWorks 2D files.	gtol.sym

STEP Options

Configure options for STEP files.

[Options]

Parameter	Description	Default
STEPDetailedTree=0/1	Set to **1** to show detailed tree for STEP files.	0

Text Options

Configure options for text files.

[Options]

Parameter	Description	Default
CODEPAGE=*num*	Forces text display of a specific language. Specify the codepage to use for text files. E.g.: Set **CODEPAGE = 932** to display Japanese text in text files.	

Parameter	Description	Default
DefaultDocPageSize	Specify the page size in inches that AutoVue should use in order to properly display text files. For example, DefaultDocPageSize=11.0,8.5 will force AutoVue to display text files at a page size of 11x8.5 inches.	

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 **1** to display in print mode.	0
VISIOPAGE=<0|1>	Displays the page outline and background. **0** = Off **1** = On	0
VISIOPAGEBKCOLOR=*num*	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 **-1**, there will be no background. Only the outline will be displayed if VISIOPAGE is on (**=1**).	-1

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
AntiAlias=<0|1>	If **1**, enhances display of monochrome raster images.	1
ArcResolution=*num*	Indicates the degree increment used in rendering arcs.	10
Contrast=value	Applies contrast to monochrome raster images. The value can range from -100 (low contrast) to100 (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
DefaultUnits=	Specify default unit for AutoVue. **1** - inches **2** - millimeter **5** - centimeter **7** - meter **8** - kilometer **9** - feet **10** - yards **11** - miles **12** - mils **14** - micron **15** - microinches	1

Parameter	Description	Default
FASTDISPLAY	VCET renders the drawing ignoring some details in order to speedup the rendering. If set to **1**, VCET performs a full rendering without any optimization of the drawing of the primitives. If set to **0**, VCET performs the following optimizations during the rendering of the files: • Draw small text as boxes • Ignore the line-style for small primitives and draw them with plain style • Ignore the point style for points and draw them in dot style	0
FASTOVERLAYDISPLAY=<0|1>	If **1**, the refreshes are faster but the color may be distorted. One of the settings may suit present requirements better than the other.	1
FLIP=<0|1|2|3>	Specifies: **0** = none **1** = horizontal **2** = vertical **3** = both	0
FORCETOBLACK=<0|1>	If **1**, forces all colors to black when displaying vector documents.	0
INVERT=<0|1>	If **1**, monochrome raster images are displayed inverted.	0
KEEPORIGINALCOLORS=<0|1>	Specifies that white graphics and black graphics should always be drawn white and black respectively, even if the background is white or black.	

Parameter	Description	Default
LOADFACETEDDATA=<0|1>	Set to **1** if you wish to read Mesh data for 3D files. Set to 0 if you wish to read BRep data for 3D files.	
MESHRESOLUTIONDEFAULT= <0|1|2>	Configure default mesh resolution for 3D files: **0** - Medium **1** - Low **2** - High	0
NEWCHILD=<0|1>	This option is only used for integrations. If **1**, 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.	0
NOACCELERATION=<0|1>	Set to **1** to disable OpenGL acceleration. It is recommended setting to **1** if 3D files are displaying blank or vector files are not displaying properly or if markup entities are not completely visible. **Note** We also recommend setting it to **1** if you have a poor graphics card, OpenGL acceleration could slow down performance for big 3D models.	0
NOLOGO=<0|1>	If **1**, the initial splash screen is not displayed.	0

Parameter	Description	Default
NOWINARCS=<0|1>	If **1**, does not use the Windows GDI functions to draw arcs. If **0**, Windows renders the arcs. This option is used for some HP print drivers that do not properly render arcs and circles.	0
OVERLAY_ROTATE_FLIP=<0|1>	Set to **1** to automatically rotate/ flip overlay files when overlaying files with AutoVue.	0
RASTERFIT=<0|1>	If **1**, fits the initial display of raster images to the screen. Otherwise, full resolution is shown.	1
RASTERMEMLIMIT=*n_kbytes*	Swaps raster data to disk when the Windows global memory heap falls below n_kbytes.	6000
RASNOFORCETOBLACK=<0|1>	Set to **1** to disable Force to Black for raster overlays and for raster files. Option is applicable only when **FORCETOBLACK=1**.	0
ROTATE=<*degrees*>	Specifies the degrees of rotation as 0, 90, 180 or 270.	0
SHOWDIMENSION=<0|1>	If **1**, shows dimension entities. Otherwise, they are not shown.	1
SHOWFILL=<0|1>	If **0**, displays only the outlines of filled entities (solids, fat polylines etc.). Otherwise, these entities are shown as filled.	1

Parameter	Description	Default
SHOWHATCHING=<0|1>	If **1**, the FILLMODE system variable (AutoCad) and the Hatch display are turned off, otherwise, Hatch entities are displayed.	0
SHOWLINESTYLE=<0|1>	If **1**, shows linestyle patterns If **0**, linestyles are displayed as solid lines.	1
SHOWLINEWEIGHT	If **1**, displays varying line thicknesses. If **0**, displays no line weights for any lines (all lines appear equal).	1
SHOWTEXT=<0|1>	If **1**, text entities are shown.	1
SHOWTREE	If **1**, tree is displayed.	1
SHOWXREFS=<0|1>	If **1**, external reference files are shown.	1
STARTINDIR	If **1**, File Open dialog always defaults to the directory specified in the "start in" option of the AutoVue shortcut. If **0**, sets File Open dialog to the last open path.	0
TILEMODE=<-1|0|1>	Specifies: **1** - model space **0** - paper space **-1** - 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.	

Parameter	Description	Default
VECTORFIT=<0|1>	If **1,** 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
VECTORWINDOWSMETA=<0|1>	If **1**, uses Windows metafiles to store vector display lists, otherwise uses a custom high-performance display list.	0
XFONTPATHS=*paths*	Specifies a semicolon-delimited list of directories to search for external fonts.	no path
XREFPATHS=*paths*	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 **1**, the text entity has a strikethrough.	0
IsUnderline	If **1**, the text entity is underlined.	0
IsItalic	If **1**, the text entity is italicized.	0

UI Color Options

Configure options to specify background color for different file formats.

[UI Colors]

Parameter	Description	Default
BKCOLORARCHIVE	Specify background color for archive files. **Note** 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.	
BKCOLORDATABASE	Specify background color for database files. **Note** 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.	
BKCOLORDOCUMENT	Specify background color for pdf formats. **Note** 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.	
BKCOLORCOLORRASTER	Specify background color for raster formats. **Note** 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.	

Parameter	Description	Default
BKCOLORMONORASTER	Specify background color for monochrome raster formats. **Note** 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.	
BKCOLORSPREADSHEET	Specify background color for spreadsheets. **Note** 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.	
BKCOLORTHUMBNAILS	Specify background color for thumbnails. **Note** 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.	
BKCOLORVECTOR	Specify background color for vector formats. **Note** 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.	

3D Options

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

[Options]

Parameter	Description	Default
DYNAMICDISPLAY	Specify render mode for dynamic display.	0
SMOOTHSHADING=<0|1>	If **1**, smooth shading is turned on.	1
SHOWAXES=<0|1>	If **1**, shows Global Axes.	1
PERSPECTIVE=<0|1>	If **1**, enables the Perspective view.	0
DISPLAYMODE	Specify the default display mode. Display mode values: **1** - Shaded **2** - Wire Polygons **4** - Wireframe **8** - Hidden Line **16** - Silhouette **32** - Shade Wire	1
PMITEXTRENDERINGSTYLE=<0|1|2>	Specify the text rendering style for PMI entities. **0** - Native Setting **1** - 3D **2** - Flat-to-screen	0

3D Color Options

[Options]

Parameter	Description	Default
BACKGROUNDCOLOR	Specify color for background. **Note** 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.	

Parameter	Description	Default
ENTITYDEFAULTCOLOR	Specify default color for 3D models. **Note** 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.	
HIGHLIGHTCOLOR	Specify color for highlighting. **Note** 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.	
DISTANCECOLOR	Specify color for distance measurement. **Note** 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.	
EDGESCOLOR	Specify color for highlighting edges. **Note** 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.	
FACESCOLOR	Specify color for highlighting faces. **Note** 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.	

Parameter	Description	Default
VERTICESCOLOR	Specify color for highlighting vertices. **Note** 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.	
SECTIONEDGECOLOR	Specify section edge color. **Note** 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.	
MINDISTFIRSTSETCOLOR	Specify color for first set in minimum distance measurement. **Note** 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.	
MINDISTSECONDSETCOLOR	Specify color for second set in minimum distance measurement. **Note** 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.	

3D Measurement Units

[3D Measurement Units]

Parameter	Description	Default
DisplayMassUnits	Specify display units for mass. Mass units values: **0** - Grams (g.) **1** - Kilogram (kg.) **2** - Milligram (mg.) **3** - Pound (lb.) **4** - Ton (US) **5** - Ton (UK - imperial system) **6** - Ounce (oz.) **7** - Slug	0
DisplayLengthUnits	Specify display units for length. Distance units values: **1** - Inch (in.) **2** - Millimeters (mm.) **5** - Centimeter (cm.) **7** - Meter (m.) **8** - Kilometer (km.) **9** - Feet (ft.) **10** - Yard (yd.) **11** - Mile (mi.) **12** - Thousandth of an inch (mils) **14** - Micron **15** - 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 **1**, density is to be applied to all parts.	0

Parameter	Description	Default
MassPropsAccuracy	integer **2** = high accuracy Possible values: **0** = LOW **1** = MEDIUM **2** = HIGH **3 =** VERY HIGH	2
InertiaTensorPosition	If **1**, computes Tensor of Inertia at Center of Gravity. If **0**, 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 **1** to display datum coordinate system entities in the tree. Set to **0** to hide datum coordinate system entities from the tree.	1
PMI_VIEW_COORDINATE SYSTEM	Set to **2** to set the visibility of datum coordinate system entities to the last saved state in the native application. Set to **1** to display datum coordinate system entities. Set to **0** to hide datum coordinate system entities from the display.	2
PMI_TREE_DATUMFEATURE SYMBOL	Set to **1** to display datum feature symbol entities in the tree. Set to **0** to hide datum feature symbol entities from the tree.	1

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

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

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

Parameter	Description	Default
PMI_VIEW_SPOTWELD	Set to **2** to set the visibility of spotweld entities to the last saved state in the native application. Set to **1** to display spotweld entities. Set to **0** to hide spotweld entities from the display.	2
PMI_TREE_SURFACEFINISH	Set to **1** to display surface finish entities in the tree. Set to **0** to hide surface finish entities from the tree.	1
PMI_VIEW_SURFACEFINISH	Set to **2** to set the visibility of surface finish entities to the last saved state in the native application. Set to **1** to display surface finish entities. Set to **0** to hide surface finish entities from the display.	2
PMI_TREE_WIRE	Set to **1** to display wire entities in the tree. Set to **0** to hide wire entities from the tree.	1
PMI_VIEW_WIRE	Set to **2** to set the visibility of wire entities to the last saved state in the native application. Set to **1** to display wire entities. Set to **0** 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.	
ECAD_3D_COMPONENTCOLOR	Specifies the color of the PCB components in 3D.	
ECAD_3D_DEFAULTBOARD THICKNESS	Specifies the board thickness for EDA 3D models.	40 (mils)
ECAD_3D_DEFAULTCOMPONENT THICKNESS	Specifies the component thickness for EDA 3D models.	40 (mils)
ECAD_3D_DEFAULTTHICKNESS UNIT	Specify display units for thickness. Thickness units values: **1** - Inch (in.) **2** - Millimeters (mm.) **5** - Centimeter (cm.) **7** - Meter (m.) **8** - Kilometer (km.) **9** - Feet (ft.) **10** - Yard (yd.) **11** - Mile (mi.) **12** -Thousandth of an inch (mils) **14** - Micron **15** - Microinch	12
ECAD_3D_DEFAULTMESURE SNAPRADIUS	Specify snap radius for snap box to appear to select entity. **Note** The snap radius is configured in pixels.	5

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
CHILDNORESIZE	Set to 1 if you want to make sure that a child markup entity is not resized when its parent is resized	0
DEF_COLOR=	Specify a windows RGB color for default markup entity color. Other values: **-1** - Assign layer color to markup entity **-2** - Hide markup entity **-3** - Assign line color (option applies to fill color only)	-1 (by layer)
DEF_LSTYLE=	Specify the default linestyle for markup entities. Possible values are: **0** - Solid line **1** - Dashed line **2** - Dashed line (smaller dashes) **3** - Dash Dot **6** - Cloud linestyle **7** - Triangle linestyle	0

Parameter	Description	Default
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: **0** - No Fill **1** - Solid Fill **2** - Transparent Fill	0
DEF_FILLCOLOR=	Specify a windows RGB color for default fill color. Other values: **-1** - Assign layer color to markup entity **-2** - Hide markup entity **-3** - 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 **Example**: FACTOR_TIF= 0.5
INFO_USER=*title*	Specifies the title of the first field in the **Markup Information** dialog.	User Name
INFO_DEPT=*title*	Specifies the title of the second field in the **Markup Information** dialog.	Department
INFO_COMP=*title*	Specifies the title of the third field in the **Markup Information** dialog.	Company
INFO_LOC=*title*	Specifies the title of the fourth field in the **Markup Information** dialog.	Location
INFO_TEL=*title*	Specifies the title of the fifth field in the **Markup Information** dialog.	Tel#

Parameter	Description	Default
LINETHICKNESS_ ZOOMABLE	Set to **1** if you want markup entity line thickness to scale according to zoom level.	0
LINESTYLE_ ZOOMABLE	Set to **1** if you want to maintain markup entity line style at all zoom levels.	0
REDAUTOPATH= <0|1>	If **0**, the markup will be saved to the directory specified in USERREDLINEPATH. If **1**, markups are saved in the **avred** sub-directory under the current directory.	1
REDLINEPATH= *directory*	Specifies the directory to use for Markup files.	The directory **avred** 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=*path_to_ signoffbg*	Specify the full name and path for the background image for the Sign Off markup entity.	**signoffstamp. bmp** in the AutoVue installation directory
SYMBOLPATH= *directory*	Specifies the directory to use for symbol files.	
TRUECOLOR=<0|1>	If **0**, the Markup entity color is inverted when it matches the background color. If **1**, 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

Parameter	Description	Default
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.	

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

Parameter	Description	Default
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 **1**, the text entity font appears in bold.	0
IsStrikeOut	If **1**, the text entity contains a strikethrough.	0
IsUnderLine	If **1**, the text entity is underlined.	0
IsItalic	If **1**, the text entity appears in italic.	0

Applications Options

Configure Applications options that apply to application associations.

[Applications]

Parameter	Description
NUMBER=*n*	This option specifies the number of associations that are defined in the section in which it is located.
APPLICATION<nnn>=<*[extension] [description][command]*>	Any number of associations can be specified with nnn. **Default***:* no associations. Extension refers to the current active file. **Example**: 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 **1**.	1 for raster files (tiff, cit, etc.); 0 for all other
OneToOne	When set to **1**, avoids scaling and offsetting the overlay file.	0
OverlayText	Specify the list of extensions supported for Auto overlay. **Example:** 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 **avwin.ini**: **[PageSizeInch]** 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 mm

[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 **avwin.ini**: [PageSizeMM] 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 and VRML: "SELECTED", "ALL".	EXTENTS for bmp and tiff. ALL for STL and VRML
EXPORTTO	STL, VRML, 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_GIF	Compuserve GIF	
PCRS_PCL	HP Laserjet Printer (PCL)	
PCRS_PCX	PCX Bitmap	
PCRS_RLC	Run Length RLC File	
PCRS_FAX	FAX	
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
2	Complete Fax Portable	PCRS_FAX
3	EverFax EFax 2	PCRS_FAX

4	EverFax EFax 3	PCRS_FAX

CONVERTTOSUB=	Subformat	Format
6	Gamma Link	PCRS_FAX
1	Calculus EZ-Fax	PCRS_FAX
5	Frecom Fax 96	PCRS_FAX
7	Hayes JT Fax	PCRS_FAX
8	NetFax Manager	PCRS_FAX
9	Product R&D Fax Modem	PCRS_FAX
10	Relisys TEFAX	PCRS_FAX
11	Ricoh	PCRS_FAX
12	SciFax	PCRS_FAX
14	Worldport	PCRS_FAX
0	Brooktrout Fax-Mail	PCRS_FAX
13	SMARTFAX	PCRS_FAX

[Options]

Parameter	Description	Default
COLORCORRECTION= [Contrast, brightness, gamma]	Set each within the range of -100 and 100.	
COLORDEPTH=<*original*\ number>	Set the number of bits for the image plane.	
COLORINVERSION=<0|1>	If **1**, inverts the regions of black and white images.	

CONVERTAREA=<DISPLAY|EXTENTS>	Indicates the portion of the drawing to be converted. If **CONVERTAREA = EXTENTS**, the file extents are printed. If **DISPLAY** is specified, the area given by the DISPLAY option is used. If the **DISPLAY** option is not set, the extents are printed.	DISPLAY
OUTPUTPAGESIZE=<A|B|C|D|E|A4|A3|A2|A1|A0|U|MAX1|MAX2>	This specifies the current page size.	A
DEFAULTHEIGHT=*height*	Specifies the default height used when converting from vector to raster formats.	480
DEFAULTWIDTH=*width*	Specifies the default height used when converting from vector to raster formats.	640
FLIPPING=<NONE|VERTICAL|HORIZONTAL|BOTH>	Specifies the flipping direction(s).	NONE
HEIGHT=*height*	The height is specified in UNITS. The units used are inches.	Raster default 480 Vector default 8.0
INPUTFILE=*fname*	Specifies the name and path of the input file.	No default
LAYER<*index*>=<0|1>	For drawings containing layers, only the layers which are equal to 1 are converted. **Example**: LAYER1=0	1 for all layers

NCOLORS=*num*	This specifies the number of colors to generate in the output image. The string **True Color** 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=*num*	Specifies the number of layers that exist.	
ORIGIN=*unitsX;unitsY*	Both X and Y are given in the current UNITS. This specifies the X and Y offset.	X=0 and Y=0
OUTPUTFILE=*fname*	Specifies the output file name.	No default
OVERLAY<*index*>= [*filename*]*[offsetx. offsety, offsetz] [basex, basey, basez] [scalex, scaley, scalez] [dpix, dpiy, dpiz]*	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 **1**, AutoVue will print as per pen settings. Set to **0**, AutoVue applies pen settings only to thin lines. Thick lines print with their original thickness. **Note** 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. **0** = All pages **1** = Page range **2 =** Current page	1
REDLINEFILE=*filename*	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. **SKIP**: suitable for color images. **AND**: for monochrome images with a light background. **OR**: for images with a dark background. **AUTO**: causes AutoVue to determine the best mode based on the image's characteristics.	SKIP
TILESIZEX=	Specifies the number of pixels in tile X.	96
TILESIZEY=	Specifies the number of pixels in tile Y.	96
TRUEEXTENTS=*X0,Y0;X1, Y1*	Specifies the true extents of the input file. Used by the conversion when **CONVERTAREA= EXTENTS**. 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=*width*	This is the width in UNITS; raster conversion default: 640, vector conversion.	10.5 inches

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=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	72

[PCRS_EPS]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	720

[PCRS_FAX]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	200
PREVIEW=<0|1>	If **1**, constructs a preview.	1
TILING=<0|1>	If **1**, tiles the image; otherwise stripes the image.	1

Parameter	Description	Default
NSTRIPS=<0|1>	If **1**, defines the number of stripes for an image.	1
TILESIZEX=	Specifies the number of pixels in tile X.	96
TILESIZEY=	Specifies the number of pixels in tile Y.	96

[PCRS_GIF]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	72

[PCRS_PLC-1]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	75

[PCRS_PLC-2]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	150

[PCRS_PLC-3]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	300

[PCRS_PCX]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	300

[PCRS_RLC]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	200

[PCRS_TIF]

Parameter	Description	Default
STEPSPERINCHX=*num* STEPSPERINCHY=*num*	Specifies the conversion factor between device units and inches.	200
PREVIEW=<0|1>	Specifies if a preview image should be generated. If **PREVIEW = 1**, then a 128x128 preview image is generated as the first page of the destination file.	1
TILING=<0|1>	If **1**, tiles the image; otherwise stripes the image.	1
NSTRIPS=<0|1>	If **1**, defines the number of stripes for an image.	1
TILESIZEX=*num*	Specifies the number of pixels in tile X.	
TILESIZEY=*num*	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. **Example**: 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 **1**, disables batch printing.	0
Browse=<0|1>	If **1**, disables the **File** menu's **Browse**, **Next, and** Previous options.	0
Launch=<0|1>	If **1**, disables the **File** menu's **Launch** option.	0
Markup=<0|1>	If **1**, disables Markup mode.	0

Parameter	Description	Default
Mail=<0|1>	If **1**, disables the **Mail** option in View mode's **File** menu. If **1**, also disables the **Notify** option found in the **Save** and **Save As** dialog as in Markup mode.	0
Print=<0|1>	If **1**, disables printing.	0
PrintSettings=<0|1>	If **1**, disables changing listed print settings - margins, watermark, headers/footers, pen settings and stamps.	0
PrintToFile=<0|1>	If **1**,disables option to print to file.	0
PrintMargins=<0|1>	If **1**, disables changing Print-Margins.	0
PrintHeadersFooters=<0|1>	If **1**, disables changing Print Headers and Footers.	0
PrintWatermarks=<0|1>	If **1**, disables changing the Print-Watermark.	0
PrintStamps=<0|1>	If **1**, disables changing the Print-Stamps.	0
PrintPenSettings=<0|1>	If **1**, disables changing the Print-Pen settings.	0
MarkupForceToBlack=<0|1>	If **1**, disables printing Markups in black when the print option (AvPrintOptions) **ForceToBlack** is set to 1.	1
Thumbnails=<0|1>	If **1**, disables the creation of Thumbnails.	0
Convert=<0|1>	If **1**, disables converting.	0
Clipboard=<0|1>	If **1**, disables copying to the clipboard.	0
SystemTray=<0|1>	If **1**, 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 **Help** menu's **About** dialog.	19
COPYRIGHT=<Name>	Copyright notice to appear in the Help menu's **About** dialog.	© C.S.I. 2003-2005

Thumbnail Options

[ThumbNails]

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

Printing Options

Watermark

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

[AvPrintWatermark]

Parameter	Description	Default
Facename=*font*	Specify the font for the printed watermark text.	
Layout=0	Specify WaterMark Orientation: **0** - Diagonal **1** - Horizontal **2** - Vertical	
LogFont=-21,0,0,0,400,0,0,0,0,3,2,1,34	Specify the font size, height, style as per the windows logfont structure.	
Text=*watermark_text*	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=*total_number_of_stamps*	Specifies the total number of defined stamps.	

Parameter	Description	Default
Stamp_entry_Units_*n*=<0|1>	Specifies the units used to position stamps. If **1**, millimeters, otherwise, inches. The **n** represents which stamp is being configured.	0
Stamp_entry_Posx_*n*	Indicates the position of **X** in the upper left corner of the stamp file. The **n** represents which stamp is being configured.	
Stamp_entry_Posy_*n*	Indicates the position of Y in the upper left corner of the stamp file. The **n** represents which stamp is being configured.	
Stamp_entry_Sizex_*n*	Specifies the width of the stamp image. The **n** represents which stamp is being configured.	
Stamp_entry_Sizey_*n*	Specifies the height of the stamp image. The **n** represents which stamp is being configured.	
Stamp_entry_Filename_*n*=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 **1**, 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

Parameter	Description	Default
Area=<0|1|2|3>	Specify page area to print: **0** - print file extents **1 -** print displayed area **2** - print limits (only for AutoCAD files) **3** - print selected area	0
AutoOrientation=<1|0>	If **1**, Office format document pages are landscape oriented if the page width is greater than the page length.	1
Factor1=*num*	**Scaling=1**, specifies the number of pixels for the scaling factor.	
Factor2=*num*	**Scaling=1**, specifies the number of units to which the specified number of pixels are scaled.	
ForceToBlack=<0|1>	If **1**, the file is printed in black and white. If **0**, in color.	0
FromPage=*num*	Indicates the starting page number of the print range.	
OneNotePerPage=<0|1>	If **1**, one note per page is printed.	0
Orientation=<1|2>	If **1**, the file is printed as portrait. If **2**, landscape.	1
OverrideThickLines=<0|1>	Setting this option to **1** applies the pen-thickness settings when printing files of formats such as DGN and HPGL.	0
PageOrient=dmOrientation	From the dmOrientation enumeration of DEVMODE.	
Pages=*total_num*	Indicates whether to print all the pages in a document, the current page, or a range of pages. **0** = All **1** = Current **2** = Range	0

Parameter	Description	Default
PaperFormname=dmFormname	From the dmPaperSize enumeration of DEVMODE.	
PaperSize=dmPaperSize	From the dmPaperSize enumeration of DEVMODE.	
PenThicknessFname=*fname*	Specifies the name of the file that contains the pen map parameters.	empty
PenThicknessUnits=<0|1>	**0** = inches **1** = mms	0
PrinterName=PrintName	Name of the Printer device	
PrintNotes=<0|1>	If **1**, notes are printed.	0
PrintOnly1stPrPg=<0|1>	If **1**, limits output to one printer page when the scaling options selected causes a single page to span over several pages.	0
PrintToFile	If **1**, prints to file.	0
Scaling=<0|1|2>	Specifies the scaling factor: 0 = fit **1** = scaling factor **2** = scaling percentage	0
ScalingFactor=*percentage*	**Scaling=2**, specifies the percentage to which the image is scaled.	
SSNoPrintRowHeader=<0|1>	If **1**, row headers are not printed for spreadsheet formats.	0
SSNoPrintColHeader=<0|1>	If **1**, column headers are not printed for spreadsheet formats.	0

Parameter	Description	Default
ThicknessScale=*original_ thickness1=print thickness1,… original_ thicknessN=print_ thicknessN*	Option only applies to Microstation files. Specify the mapping of MicroStation line weights to line thickness on paper. The option should be set the same as in Microstation. **Example**: 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	
THICKNESSSCALEUNIT=<mm|inch|dot>	Specify the unit to use for the thickness scale. Option only applies to Microstation files when ThicknessScale is set.	
ToPage=*num*	Indicates the ending page number of the print range.	
Units=<0|1|2>	Specifies the scaling factor units: **0** = pixels **1** = inches **2** = millimeters	1
WaterMarkOnTop=<0|1>	If **1**, 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=*font*	Specifies the font used for the printed headers and footers.	
LeftHeader=*text*	Specifies the text for the left header.	
CenterHeader=*text*	Specifies the text for the center header.	Full path of the current document
RightHeader=*text*	Specifies the text for the right header.	
LeftFooter=*text*	Specifies the text for the left footer.	
CenterFooter=*text*	Specifies the text for the center footer.	
RightFooter=*text*	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. **Example**: 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: **0** - inches **1** - 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 **1**, 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: **0** - inches **1** - millimeters	0
Left	Left margin.	0.25
Top	Top margin	0.25
Right	Right margin.	0.25
Bottom	Bottom margin.	0.25
OneNotePerPage	If **1**, 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=*alphanum*	Specifies a comma-separated list of symbols (in unicode) for area measurements. **Example**: u0398, u2221A, 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=*alphanum*	Specifies a comma-separated list of symbols (in unicode) for arc measurements. **Example**: u0398, u2221A, 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=*alphanum*	Specifies a comma-separated list of symbols (in unicode) for angle measurements. **Example**: u0398, u2221A, 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=*alphanum*	Specifies a comma-separated list of symbols (in unicode) for distance measurements. **Example**: u0398, u2221A, 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.	

Parameter	Description	Default
DistanceUnits	Specify the default unit for 3D distance measurements.	1 (inches)
SymbolList=*alphanum*	Specifies a comma-separated list of symbols (in unicode) for 3D distance measurements. **Example**: u0398, u2221A, u2248.	

Calibrate Measurements

Specify the default units for measurements.

[Calibrate]

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

Table below 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

Unit	value
twips	9
microns	10
mils	11
mils/10	12
microinches	13

Script and DDE Commands

AutoVue registers itself as a 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 **ON**, 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 **Browse** dialog.
COMPARE <filename>	Compares the file in the active window with “filename”.
FILE NAME {filename}	Same as **VIEW**, except that if {filename} is not supplied it displays the **File Open** 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 **Launch** 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 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]	**Filename** - the name of the export file format is either **CVS** or **PDX**. Default value is **CVS** if nothing is specified. **scope** - is either **CP** (current page) or **ED** (entire design). Default is **CP** is nothing is specified. **attributes** - a list of commas separating attribute names. If no attributes are specified then the default BOM attribute names are used. If there are no default BOM attribute names, then the command will do nothing. **Note** 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.

Printing Commands

Command	Description
PRINT-OPTION *option=value*	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=*string*	Center footer text.
CH=*string*	Center header text.
LF=*string*	Left footer text.
LH=*string*	Left header text.
RH=*string*	Right header text.
RF=*string*	Right footer text.
COPIES=<number of copies>	Specify number of copies.
ORIENTATION=<P | L>	Specify orientation.
PAGERANGE=<from page nnn-to page mmm>	Specify page range.
SCALE=<FIT | *nn.nn* | *n%*>	Set n% to the scale value. **Example:** PRINT-OPTION SCALE=60% Set nn.nn to a scale factor.
UNITS=<INCH | MM | PIXEL>	Specify units.
PRINT-OPTION WATERMARK "watermark-text"	Specify watermarking text.

PRINT-OPTION FORCETOBLACK=<0|1>	Specify if you want to force all colors to black
PRINT-OPTION ORIENTATION [L | P]	Specify orientation.
PRINT-OPTION PRINTDRIVER "drivername"	Specify the print device to use, e.g. "Epson Stylus Color 750."
PRINT-OPTION PENMAPFILE "penmapfilename"	Specify the penmapping file to use.
PRINT-OPTION PAPERSIZE "nPaperSize"	Specify the paper size to output to. The value **nPaperSize** is from the table below, if supported by the printer.

DMPAPER_LETTER	1	/* Letter 8 ½ x 11 in */
DMPAPER_LETTERSMALL	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 7/8 x 8 7/8 */
DMPAPER_ENV_10	20	/* Envelope #10 4 1/8 x 9 ½ */
DMPAPER_ENV_11	21	/* Envelope #11 4 ½ x 10 3/8 */
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 5/8 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 NOTE USE */
DMPAPER_RESERVED_49	49	/* RESERVED--DO NOTE USE */
DMPAPER_LETTER_EXTRA	50	/* Letter Extra 9 \275 x 12 in */
DMPAPER_LEGAL_EXTRA	51	/* Legal Extra 9 \275 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 \275 x 11 in */
DMPAPER_A4_TRANSVERSE	55	/* A4 Transverse 210 x 297 mm */
DMPAPER_LETTER_EXTRA_TRANSVERSE	56	/* Letter Extra Transverse 9\275 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 size to output to. The value **nPaperTray** is from the table below, if supported by the printer.

DMBIN_FIRST	DMBIN_UPPER
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 *option=value*	Specify the convert option and value.

Convert Options

Command	Description
AREA=<DISPLAY | EXTENTS>	Specify convert area (extents or display).
SCALE=n	Converts the output file to the set scale.

FORMAT=*format*	Where *format* specifies an output driver. Available output drivers: • **PCRS_BMP**: windows bitmap • **PCRS_EPN**: Epson printer format • **PCRS_EPS**: Encapsulated PostScript (raster) • **PCRS_FAX**: Fax output • **PCRS_GIF**: CompuServe GIF • **PCRS_GP4**: CALG Group IV Type 1 • **PCRS_PCL**: HP/PCL output • **PCRS_PCX**: Paintbrush PCX • **PCRS_RLC**: RLC format • **PCRS_TIFF**: TIFF format • **PC3D_STL**: 3D format to STL • **PC3D_VRML**: Convert 3D format to VRML
SUBFORMAT=n	Some of the output drivers support several subformats. The value **n** specifies which subformat to use.
PCRS_FAX	Fax output. **Subformat**: **0** - Brooktrout Fax **1 -** Calculus EZ-Fax **2 -** Complete Fax Portable **3 -** EverFax EFax 2 **4 -** EverFax EFax 3 **5 -** Frecom FAX 96 **6** - Gamma Link **7** - Hayes JT FAX **8** - NetFax Manager **9** - Product R&D Fax Modem **10** - Relisys TEFAX **11** - Ricoh **12** - SciFax **13** - SMARTFAX **14** - World Port
PCRS_GIF	CompuServe GIF: **0** - Non-Interlaced **1** - Interlaced

PCRS_PCL	HP/PCL output: **0** - 75 DPI **1** - 150 DPI **2** - 300 DPI
PCRS_TIF	TIFF format: **0** - Uncompressed **1** - Packbits compressed **2** - Group III compressed **3** - Group IV compressed
OUTPUT=*filename*	Specifies output filename. If not specified, the default name is used.
SIZE=*width height*	Specifies the size of the converted output. ***See CONVERT-OPTION PAGESIZE***
STEPSPERINCH = *n*	Certain formats (e.g. plotter formats) allow a resolution factor to be set.
PAGESIZE = *pagesize*	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
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 {*blockname*}	Displays the specified block If no blockname is given, the Blocks dialog appears.
CONTRAST LIGHT	
CONTRAST NORMAL	
CONTRAST DARK	
CONTRAST 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 version 11/12 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 *minx miny maxx maxy*	Draw a zoom box using world (drawing) coordinates.

Markup Commands

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

Option Commands

Command	Description
OPTION MENU <ON | OFF>	Indicates whether or not we want the top menu to be displayed.
OPTION MENU DELETE *n*	Deletes the nth menu item. The menus are numbered from 0 to nMenus-1
OPTION MENUITEM <DELETE> n m	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 or not we want the top toolbar to be displayed.
OPTION STATUSBAR <ON | OFF>	Indicates whether or not we want the status-bar area to be displayed.
OPTION TEXT <ON | OFF>	Indicates whether we want text displayed.
OPTION LINESTYLES <ON | OFF>	Indicates whether we want linestyles displayed.
OPTION DIMENSIONS <ON | OFF>	Indicates whether we want dimensions displayed.
OPTION FILLING <ON | OFF>	Indicates whether we want filling displayed.
OPTION XREF <ON | OFF>	Indicates whether we want external references displayed.
OPTION RASTERDISPLAY <FULL | FIT>	Sets the default for the initial display of raster files (at full resolution or fit to the window).
OPTION BASEFONT *fontname* <normal | bold | italic | bold-italic> *pointsize*	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 *red green blue*	Sets the background color for the view window. The color is specified as an RGB triplet, with each index ranging from 0 to 255.
OPTION MENUITEM ENABLE *all MenuItemName*	Enables the menu item specified by MenuItemName (see below) in all windows.
OPTION MENUITEM DISABLE *all MenuItemName*	Disabled the menu item specified by MenuItemName (see below) in all windows.
OPTION MENUITEM ENABLE *view MenuItemName*	Enables the menu item specified by MenuItemName (see below) in the current window.
OPTION MENUITEM DISABLE *view MenuItemName*	Disables the menu item specified by **MenuItemName** listed in the table below, in the current window.

ID_FILE_ASSOCIATE	ID_FILE_BATCH CONVERSION	ID_FILE_BROWSE
ID_FILE_COMPARE	ID_FILE_CONVERT	ID_FILE_EXIT
ID_FILE_LAUNCH	ID_FILE_MAIL	ID_FILE_MAIL_ROUTE
ID_FILE_MARKUP	ID_FILE_NEXT	ID_FILE_OPEN
ID_FILE_OVERLAYS_ MODIFY	ID_FILE_OVERLAYS_ SELECT	ID_FILE_PDF_PRINT
ID_FILE_PREVIOUS	ID_FILE_PRINT	ID_FILE_PRINT_SETUP
ID_FILE_PROPERTIES	ID_FILE_SAVEALL	ID_FILE_SCAN_ACQUIRE
ID_FILE_SCAN_ SELECTSOURCE	ID_HYPERLINK_BREAK	ID_HYPERLINK_EDIT
ID_HYPERLINK_ ESTABLISH	ID_HYPERLINK_FIRE	ID_HYPERLINK_GO_ BACK
ID_HYPERLINK_ HISTORY	ID_HYPERLINK_LIST	ID_MARKUP_CONSOLIDA TE

ID_MARKUP_ CALIBRATE	ID_MARKUP_ EDITDIMENSION	ID_MARKUP_EDITNOTE
ID_MARKUP_EDITTEXT	ID_MARKUP_EXIT	ID_MARKUP_INFO
ID_MARKUP_ LISTNOTES	ID_MARKUP_NEW	ID_MARKUP_OPEN
ID_MARKUP_SAVE	ID_MARKUP_SAVE_AS	ID_MARKUP_SETACTIVE
ID_OPTION_CFG_MAIL	ID_OPTION_CFG_ SCANNER	ID_OPTION_CFG_ THUMBNAILS
ID_OPTIONS_ ALLWAYSONTOP	ID_OPTIONS_CLIPBOARD	ID_OPTIONS_GENERAL
ID_OPTIONS_ THUMBNAILS	ID_OPTIONS_TOOLBARS	ID_OPTIONS_TOOLS
ID_OPTIONS3D_ GENERAL	ID_OPTIONS3D_TOOLS	ID_VIEW_BIRDS_EYE
ID_VIEW_BLOCKS	ID_VIEW_CONTENT_NEXT	ID_VIEW_CONTENT_ NUMBER
ID_VIEW_CONTENT_ PREVIOUS	ID_VIEW_DRAWING_INFO _ATTS	ID_VIEW_DRAWING_INFO _ENTITY
ID_VIEW_DRAWING_ INFO_ENTS	ID_VIEW_FLIP_BOTH_ AXES	ID_VIEW_FLIP_HORZ_ AXIS
ID_VIEW_FLIP_NONE	ID_VIEW_FLIP_VERT_ AXIS	ID_VIEW_IMAGE_ANTI ALIAS
ID_VIEW_ IMAGEINVERT	ID_VIEW_LAYERS	ID_VIEW_MAGNIFY
ID_VIEW_MAGNIFY WND	ID_VIEW_PAGE_NEXT	ID_VIEW_PAGE_NUMBER
ID_VIEW_PAGE_ PREVIOUS	ID_VIEW_PAN	ID_VIEW_PDF_DISPLAY_ BOOKMARKS
ID_VIEW_PDF_DISPLAY _PAGEONLY	ID_VIEW_PDF_DISPLAY_ THUMBNAILS	ID_VIEW_PDF_NEXT_ VIEW
ID_VIEW_PDF_PAGE_ FIRST	ID_VIEW_PDF_PAGE_ LAST	ID_VIEW_PDF_PAGE_ NEXT
ID_VIEW_PDF_PAGE_ PREVIOUS	ID_VIEW_PDF_PAN	ID_VIEW_PDF_PREVIOUS _VIEW

ID_VIEW_PDF_ZOOM_ FIT_BOTH	ID_VIEW_PDF_ZOOM_ FIT_HORZ	ID_VIEW_PDF_ZOOM_ FULL_RES
ID_VIEW_PDF_ZOOM_ IN	ID_VIEW_PDF_ZOOM_OUT	ID_VIEW_REFRESH
ID_VIEW_ROTATE_0	ID_VIEW_ROTATE_180	ID_VIEW_ROTATE_270
ID_VIEW_ROTATE_90	ID_VIEW_VIEWPOINT	ID_VIEW_VIEWS
ID_VIEW_XREFS	ID_VIEW_ZOOM_BOX	ID_VIEW_ZOOM_FIT_ BOTH
ID_VIEW_ZOOM_FIT_ HORZ	ID_VIEW_ZOOM_FIT_ VERT	ID_VIEW_ZOOM_FULL_ RES
ID_VIEW_ZOOM_IN	ID_VIEW_ZOOM_OUT	ID_VIEW_ZOOMPGWIDTH
ID_VIEW_ZOOM_ PREVIOUS	ID_WINDOW_NEW	

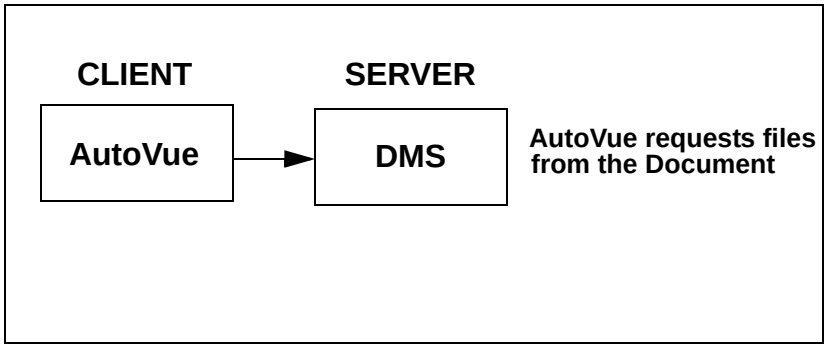
Integration

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

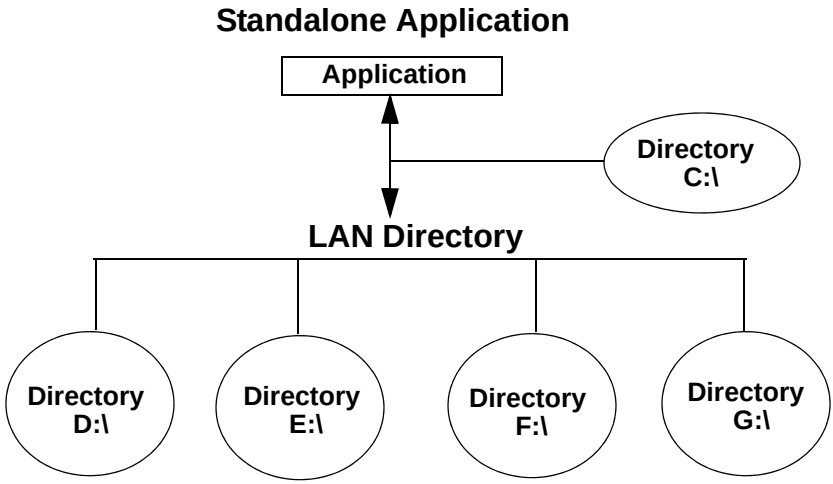
Integration is a way of connecting an existing application – the host/server – with applications that have unique areas of expertise thereby enhancing the host application by expanding its abilities.



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

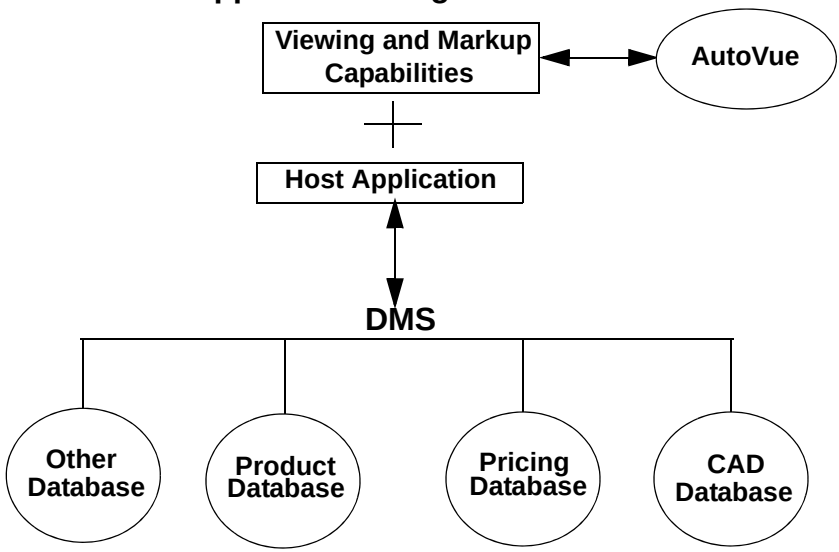
There are three ways to integrate AutoVue with various host applications:

- 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.

There are two types of integration that are immediately available after installing AutoVue on your system:

- **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.

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
#define PCALLBACK_far _pascal __export _loadds	

Entry Point	Description
BOOL PCALLBACK AVLINK_Start(LPRECT rcPos)	Starts up AutoVue, positioning AutoVue in the rectangle specified by rcPos.
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\dll**.

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 OLE Object
Dim OleObj As Object


" Make connection with AutoVue
Sub LoadOleObj()
   Set OleObj = CreateObject("AutoVue.Application")
   End Sub
```

```
" Break connection with AutoVue
Sub UnloadOleObj()
   If (IsObject(OleObj)) Then
     OleObj.Execute (“QUIT”)
   End If
   Set OleObj = Nothing
End Sub

" Excecute commands in AutoVue
Sub ExecuteOleObj()
   If (IsObject(OleObj)) Then
" Command syntax is like DDE, DLL
“ and Scripting - integration.
     “ Open a file through the user interface
     OleObj.TransmitCommand(“FILE OPEN”)
     " Show file
     OleObj.TransmitCommand(“WINDOW SHOW”)
     " Pause for 2 seconds
     OleObj.TransmitCommand(“PAUSE 2000”)
     “ Open the specified file
     OleObj.TransmitCommand(
         "FILE OPEN c:\samples\Eagle.bmp”)
         “ Print the file
     OleObj.TransmitCommand (“PRINT”)
     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 CSI. A limited subset of this technology is available through EDAT allowing users to query CAD drawings (AutoCAD DWG, DXF and MicroStation DGN) and extract entity information (geometry/extended data/ attribute tags). More information on the EDAT API can be found in the Docs directory of your AutoVue CD. Examples of integrations using the EDAT API can be found in the Integrat directory of the AutoVue CD.

AutoVue's User Interface under the **View** 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. Further information on EDAT can be found in the Docs directory of your AutoVue CD. Examples of integrations using the EDAT API can be found in the Integrat directory of the AutoVue CD.

VCET API

AutoVue is built using CSI'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.

In addition to the above APIs, additional tools are provided with AutoVue. These include:

- **Outtext**: 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 an index/search engine. 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.
- **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 Version 6 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.

Examples of integrations using these tools and APIs 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
{curly braces}	Indicates optional information.
[square brackets]	Required syntax element.s
Bold	Introduces a literal expression which must be entered exactly as shown.
Italics	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 {*directory_name*}	Changes working directory.
PAUSE {*nn*}	Pauses for nn milliseconds.
QUIT	Terminates application.

File Commands

Command	Description

VIEW {*filename*}	Displays the specified file. If no *filename* is supplied it displays the File-Open dialog.
FILE OPEN {*filename*}	Same as VIEW.
FILE-NEXT	Goes to the next file.
FILE-PREVIOUS	Goes to the previous file.
BROWSE	Activates the Browse dialog.
COMPARE {*filename*}	Compares the file in the active window with the filename.
LAUNCH {*filename*}	appname must match an application defined as an association for the current file type. If it is omitted, display the Launch dialog.
OVERLAY {filename {x, y {scale}}	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. 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 {*blockname*}	Views the specified block. If no blockname 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 [*layername*] {*layername2...*} [ON | OFF]	Turns the specified layers ON or OFF.
NAMEDVIEW {*view_name*}	Sets the view to the specified named view. If no view-name is given, makes the Named Views dialog appear.
PAGE {n}	Goes the specified page.
PAGE-NEXT	Goes to the next page.
PAGE-PREV	Goes to the previous page.
PAN [f*rom-x from-y to-x to-y*]	Pans the image from (from-x, from-y) to (to-x, to-y), in World Coordinates.
PAN {*x-delta y-delta*}	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, start a command shell.
TILEMODE [AUTO | OFF | ON]	This option only applies to AutoCAD version 11/12 drawings. Set the tile mode to the value in the drawing file, or to Paperspace, or to Modelspace, respectively.
VPOINT {*x y z*}	Changes the viewpoint of a 3-D image.
ZOOM [*min-x min-y max-x max-y*]	Zooms into the box specified by (min-x, min-y) (max-x, max-y). The values are given in World Coordinates.
ZOOM [*percent*]	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 [*option = value*]	The next section describes available script options.

Print Options

Command	Description
AREA=[DISPLAY | EXTENTS]	Specify print area (extents or display)
SCALE=[FIT | *scale-factor*]	Specify scale factor.
UNITS=[INCH | MM | PIXEL]	Specify units.
LH=[*string*]	Left header text.
LH=[*string*]	Center header text.
RH=[*string*]	Right header text.
LF=[*string*]	Left footer text.
CF=[*string*]	Center footer text.
RF=[*string*]	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 [*option = value*]	The following section describes the available script options.

Convert Options

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

PAGESIZE=[*page-size*]	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 sub-formats.

Format	Description
Sub-Format	**Sub-Format Description**
PCRS_BMP	**Windows bitmap**
PCRS_EPN	**Epson printer format**
PCRS_EPS	**Encapsulated PostScript (raster)**
PCRS_FAX	**FAX output**
0	Brooktrout fax
1	Calculus EZ-FAX
2	Complete fax portable
3	EverFax Efax 2
4	EverFax Efax 3
5	Frecom FAX 96
6	Gamma Link
7	Hayes JT FAX
8	NetFax Manager
9	Product R&D Fax Modem
10	Relisys TEFAX

Format	Description
Sub-Format	**Sub-Format Description**
11	Ricoh
12	SciFax
13	SMARTFAX
14	WorldPort
PCRS_GIF	**CompuServe GIF**
0	Non-Interlaced
1	Interlaced
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 {*ID*}	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>	Determines if the top menu is displayed.
OPTION MENU DELETE [*N*]	Deletes the Nth menu item. The menus are numbered from 0 to nMenus-1.
OPTION MENUITEM DELETE *[N M]*	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]	Determine if the top toolbar is displayed.
OPTION STATUSBAR [ON | OFF]	Determines if the status bar area is displayed.
OPTION TEXT [ON | OFF]	Determines if text is displayed.
OPTION FONTS [ON | OFF]	Determines if fonts are displayed.
OPTION DIMENSIONS [ON | OFF]	Determines if dimensions are displayed.
OPTION FILLING [ON | OFF]	Determines if filling is displayed.
OPTION XREF [ON | OFF]	Determines if external references are displayed.
OPTION RASTERDISPLAY [FULL | FIT]	Selects the default for the initial display of raster files (at full resolution or fit to the window).
OPTION BASEFONT *fontname* {normal|bold|italic|bold-italic} *pointsize*	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 *[red green blue]*	Selects a background color for the view window. The color is specified as an RGB triplet, with 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	
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.
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
EDAT ATT *[filename [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.
EDAT INFO *[filename [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.
EDAT LIST *[filename [x0, y0, x1,y1]]*	Extracts entity information for all entities contained within a bounding box from the viewed document. If specified, the extracted data is stored in filename; otherwise a dialog displays the information. If the bounding box (x0,y0 -> x1,y1) is specified then all entities contained in the bounding box, in World Coordinates are queried. Otherwise, the user is prompted to select a rectangle.

Activex Control

AutoVueX Control

Properties

Property	Description
BSTR **SRC**	Source file path.
boolean **ShowScrollBars**	Flag that indicates whether or not to show Scrollbars.
boolean **ShowMainToolBar**	Flag that indicates whether or not to show Main Toolbar.
boolean **ShowAuxiToolBar**	Flag that indicates whether or not to show Auxiliary Toolbar.
boolean **ShowStatusBar**	Flag that indicates whether or not to show Status Bar.
boolean **EnablePopupMenu**	Flag that indicates whether or not to enable Popup Menu.
boolean **MrkMainToolbar**	Flag that indicates whether or not to show Markup MainToolbar.
boolean **MrkPensToolbar**	Flag that indicates whether or not to show Markup PensToolbar.
boolean **MrkEntitiesToolbar**	Flag that indicates whether or not to show Markup EntitiesToolbar.
boolean **MrkColorsToolbar**	Flag that indicates whether or not to show Markup ColorsToolbar.
BSTR **MrkFileLocation**	Directory where Markup files are stored.
OLE_COLOR **BgColor**	Background color.
short **Rotate**	Specifies current rotation value. Can be only 0,90, 180, 270.

short **Flip**	0 - No flipping 1 - Flip horizontal 2 - Flip vertical 3 - Flip both
short **Page**	Specifies current page.
short **Extents**	0 - Unchanged 1 - Fit 2 - Fit Width 3 - Custom

The following 4 properties are used to determine the extents:

Property	Description
double **ExtMinX**	Minimal X coordinate of extents
double **ExtMinY**	Minimal Y coordinate of extents
double **ExtMaxX**	Maximal X coordinate of extents
double **ExtMaxY**	Maximal Y coordinate of extents

Methods

Method	Description
void **SetContrast(***long contrast Value*)	Set the image contrast to be the specific value; this only applies to raster files.
void **GetContrast()**	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)
void **SetAntiAlias()**	Scale to gray. Enhances the raster file image details that are viewed at less than 100% zoom.
void **ShowLayersDlg()**	Display the **Layers** dialog.
void **ShowBlocksDlg()**	Display the **Blocks** dialog.

void **ShowNamedViewsDlg()**	Display the named view dialog.
void **ShowXRefDlg()**	Display the XReference dialog.
void **ZoomFit()**	Zoom to fit.
void **ZoomPrevious()**	Undo last zoom operation.
void **ZoomWidth()**	Zoom to fit width.
void **ZoomHeight()**	Zoom to fit height.
void **ZoomByFactor**(double factor) **Parameters** factor	Zoom by factor. Zooming factor.
void **ZoomFullResolution()**	Displays rasters using full resolution; for other formats same as ZoomFit.
void **PrintIt (boolean bPrintDirect** **Parameters** bPrintDirect	Print current document. Flag indicating whether or not to show a dialog box to user.
void **PrintPreview** (boolean bPreviewDirect,boolean bWantFrame) **Parameters** bPreviewDirect bWantFrame	Preview current document printing Flag indicating whether or not to show a dialog box to user. Flag for indicating whether or not to preview with frame.
void **SetPrintOptions**(BSTR sEntry,BSTR sValue) **Parameters**	Set print options, call this method prior to call PrintIt or PrintPreview to set print options

sEntry: 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.

sValue - Valid values are dependent on each specific print option entry.	Option values.
PRINT_OPT_ORIENTATION	**PORTRAIT**: Set print page orientation as portrait. **LANDSCAPE**: Set print page orientation as landscape.
PRINT_OPT_DISABLE_ HEADERSFOOTERS	**TRUE**: Disable headers/footers print option. **FALSE**: Enable headers/footers print option.
PRINT_OPT_DISABLE_ WATERMARKs	**TRUE**: Disable watermark print option. **FALSE**: Enable watermark print option.
PRINT_OPT_DISABLE_ MARGINS	**TRUE**: Disable margin print option. **FALSE**: Enable margin print option.
PRINT_OPT_DISABLE_STAMPS	**TRUE**: Disable stamp print option. **FALSE**: Enable stamp print option.
PRINT_OPT_DISABLE_ PENSETTINGS	**TRUE**: Disable pen setting print option. **FALSE**: Enable pen setting print option.
PRINT_OPT_DISABLE_ PRINTTOFILE	**TRUE**: Disable print to file print option. **FALSE**: Enable print to file print option.
PRINT_OPT_DISABLE_PRINT	**TRUE**: Disable print function. **FALSE**: Enable print function.
ALIGNMENT	One of the following values: • CUSTOM • TOPLEFT • TOPCENTER • TOPRIGHT • MIDDLELEFT • CENTER • MIDDLERIGHT • BOTTOMLEFT • BOTTOMCENTER • BOTTOMRIGHT
PRINTOFFSETX	Value in print units.
PRINTOFFSETY	Value in printing units.

PRINTPAGEONLY	Disable/enable print only one page print option.
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.
long **GetVcetHandle()**	**Return Value**: Returns handle of the VCET window.
boolean **EnterMarkupMode()**	Enter Markup mode. **Return Value**: **TRUE** - entered Markup mode successfully **FALSE** - user canceled operation
boolean **ExitMarkupMode()**	Exit Markup mode. **Return Value**: **TRUE** - exited Markup mode successfully **FALSE** - user canceled operation
IDispatch *** MrkObj()**	**Return Value**: Returns pointer to AvMarkupX object if in Markup mode otherwise returns NULL
IDispatch *** PrnObj()**	**Return Value**: Returns pointer to AvPrintX object if in Print Preview mode otherwise returns NULL
short **GetMode()**	**Return Value**: Returns current mode **0** - View mode **1** - Markup mode **2** - Print Preview mode
void **PageNext()**	Displays next page.
void **PagePrevious()**	Displays previous page.

void **PageSelect()**	Selects page number.
boolean **GetMousePos**(double* pPosX, double* pPosY	**Return Value**: **TRUE** if mouse is in the window rectangle; **FALSE** otherwise
Parameters	
*pPosX	X coordinate of mouse position
*pPosY	Y coordinate of mouse position
void **ZoomInWorld**(double MinX, double MinY, double MaxX, double MaxY)	Zoom box. The box is specified in world coordinate
Parameters	
MinX	The x-coordinate of the low-left corner of a zoom box.
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.
boolean **SetLicenseFilePath** (BSTR sLic Path)	Set path environment variable for AutoVueX OCX control. **Return Value**: **TRUE** if the path environment variable is set **FALSE** - otherwise
Parameters	
sLicPath	The path where the AutoVueX OCX is located
boolean **EnableMarkup**(boolean fEnable)	Enable or disable Markup function. **Return Value**: The previous Markup status.
Parameters	

fEnable	Enable Markup if **TRUE**, disable it otherwise.
void **EnablePanMode**(boolean bEnable)	Enable or disable Pan Mode
Parameters	
bEnable	Flag that indicates to turn on Pan Mode or not
long **GetNumCrossProbe Entities()**	**Return Value**: Returns number of entities being cross-probed.
BSTR **GetCrossProbeEntity Type** (long nIndex)	**Return Value:** Returns a string that represents the internal type of the entity being cross-probed.
Parameters	
nIndex	Index of the entity being cross-probed.
BSTR **GetCrossProbeEntity Name** (long nindex)	**Return Value**: Returns a string that represents the internal name of the entity being cross-probed.
void **ClearCrossProbeEntities()**	Marks all the entities as not used for cross-probing.
void **AddCrossProbeEntity** (BSTR sType, BSTR sName)	Marks an entity as used for cross-probing.
Parameters	
sType	Internal type of the entity.
sName	Internal name of the entity.
void **ZoomSelected()**	Zoom fit to the selected entity/entities.
void **ShowNetConnectivity()**	Highlight all the graphical entities.
long **GetNumEcadEntities** (LPCTSTR sType)	Return the number of entities of a specified type that are present in the loaded document
Parameters	
sType	Entity type.

BSTR **GetEcadEntityName** (LPCTSTR sType, long indx)	Return the standard name of the indexed entity of the specified type.
Parameters	
sType	Entity type.
indx	Entity index.
long **GetEcadEntityNAttr** (LPCTSTR sType, long indx)	Return the number of attributes of the specified entity
Parameters	
sType	Entity type.
indx	Entity index.
BSTR **GetEcadEntityAttrName** (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.
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.
long **GetNumEcadEntityDefs()**	Return the number of entity definitions.
BSTR **GetEcadEntityDefName**(long indx)	Return the name of the indexed entity definition.
Parameters	

indx	Entity index.
long **GetEcadEntityDefFlags** (long indx)	Return the flags of the indexed entity definition.
Parameters	
indx	Entity index.
long **GetEcadEntityDefNAttr** (long indx)	Return the number of attributes of the indexed entity definition.
Parameters	
indx	Entity index.
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.
long **GetEcadEntityDefAttr Flags**(long indx, long attr)	Return the flags of the 'attr'th attribute of the indexed entity definition.
Parameters	
indx	Entity index.
attr	“attr” th attribute.
long **GetEcadEntityDefAttr Type**(long indx, long attr)	Return the type of the 'attr'th attribute of the indexed entity definition.
Parameters	
indx	Entity index.
attr	“attr” th attribute.
void **ShowEntityTypeFilterDlg()**	Show Entity Type Filter dialog.
void **ShowVerifyDesignDlg()**	Show Verify Design dialog.
void **ShowEntityBrowserDlg()**	Show Entity Browser dialog.

void **ShowBillofMaterialDlg()**	Show Bill of Material dialog.
void **ShowEntityPropertiesDlg()**	Show Entity Properties dialog.
void **ShowFileVersionInfoDlg()**	Show File Version Information dialog.
void **SetPageByTitle**(BSTR sTitle)	Set the page by Title.
Parameters	
sTitle	Title of the page.
void **SetNamedView**(long 1Index)	Set Named views.
Parameters	
Llindex	Named view index.
void **SetNamedViewByName** (BSTR sName)	Set Named view by names.
Parameters	
sName	Name of the view.
void **ShowImportDesignDlg()**	Show Import Design dialog.
void **EnableZoomBoxMode** (boolean bEnable)	Enable zoom (box) mode.
Parameters	
bEnable	**TRUE**: 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 **FALSE:** 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).
void **EnableRotateMode**(boolean bEnable)	Enable the rotate mode. Works only for 3D file formats

Parameters	
bEnable	**TRUE**: Enter the rotate mode, will force to exit zoom, pan or spin modes. **FALSE:** No action.
void **ReCenter** (short nType)	Applicable to 3D file formats only, re-center the complete drawing or selected entity based on “nType”.
Parameters	
nType	**0** - Re-center the complete drawing. **1** - Re-center the selected drawing. **2** - Re-center the entity.
void **ShowPMIFilteringDlg()**	Applicable to 3d file formats only. Show the PMI Filter dialog.
void **ShowLightingDlg()**	Applicable to 3d file formats only. Show the lighting dialog.
void **ShowDefineSectionDlg()**	Applicable to 3d file formats only. Show the Define section dialog
void **ShowUserCoordSystems Dlg()**	Applicable to 3d file formats only. Show the User coordinate systems dialog
void **EnableManipulators** (boolean bEnable)	Applicable to 3d file formats only. Enable/ Disable the manipulator.
Parameters	
bEnable	**TRUE**: Enable the manipulator (if already active, then no action). **FALSE**: Disable the manipulator (if already disable, then no action).
void **ShowPartAlignmentDlg()**	Applicable to 3D file formats only. Show the Part Alignment dialog.
void **ShowModelTransformDlg()**	Applicable to 3D file formats only. Show the Model Transform dialog.
void **ResetTransformation()**	Applicable to 3D file formats only. Reset transformation.

void **ShowInterferenceCheck Dlg()**	Applicable to 3D file formats only. Show the Interference Check dialog.
long **SelectOverlay()**	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
long **AddOverlay**(BSTR sFileName)	Adds sFileName as an overlay. Returns the overlay ID, if successful, or -1 if the operation failed.
boolean **RemoveOverlay**(long ID)	Removes the overlay with id = ID. Returns "true", if successful, or "false" if the operation failed.
long **RemoveOverlay()**	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 **true**, the user will interactively specify the top-left corner of the overlay (position the overlay).
sizeByUser	If **true**, 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.
boolean **DumpModelTree**(BSTR fileName)	Exports the data contained in the current model tree to the specified XML file. **Return Value**: TRUE if the file could be written, FALSE otherwise.
Parameters	
fileName	Output filename.
long **ShowConvertDialog()**	Displays Conversion dialog.
void **ConvertIt()**	Perform conversion based on the setting previously saved in **avx.ini**.
void **SetConvertOptions**(string sEntry, string sValue1, string2 sValue2)	Save conversion settings into **avx.ini**.
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_FAX | PCRS_GIF | PCRS_GP4 | PCRS_IBM | PCRS_PCL | PCRS_PCX | PCRS_RLC | PCRS_TIF | PC3D_STL | PC3D_VRML
- 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

boolean **Export3DBom**(BSTR fileName)	Export 3D BOM (Bill of Material) as text file. **Return Value**: TRUE if the file could be written, FALSE otherwise.
Parameters	
fileName	Output filename.

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

Parameters	
fileName	Output filename.
sFormat	Export format, one of two values “PDX” or CSV”.
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.
void **ShowExplodeDialog()**	Show 3D Explode dialog.
void **Show3DSearchDialog()**	Show 3D Search dialog.

Events

Event	Descriptions
void **ModeChanged**(short nOldMode, short nNewMode)	Fired when modes changes.
Parameters	
nOldMode	OldMode value (see **GetMode** method for values).
nNewMode	NewMode value (see **GetMode** method for values).
void **StatusChanged**(short nNewStatus)	Fired when status changes.
Parmeters	
nNewStatus	New status value: • STATUSIDLE = 0x00 • STATUSPROCESSING = 0x01 • STATUSREADING = 0x02 • STATUSREPFRESHING = 0x04 • STATUSREGENERATING = 0x08 • STATUSREADINGFINISHED = 0x10

Event	Descriptions
void **HelpString**(BSTR szMsg)	Help String for status indicator.
Parameters	
szMsg	Help message.
void **ExtentsChanged**(double extMinX, double extMinY, double extMaxX, double extMaxY)	Fired when extents change internally (not when properties change).
Parameters	
extMinX, extMinY,extMaxX, extMaxY	New extents' values.
void **PageChanged**(short nNewPage)	Fired when page changes internally.
Parameters	
nNewPage	New page value.
void **RotateChanged**(short nNewRotate)	Fired when rotate values changes internally.
Parameters	
nNewRotate	New rotate value.
void **FlipChanged**(short nNewFlip)	Fired when flip value changes internally.
Parameters	
nNewFlip	New flip value.
void **OnLMButtonDown**(double xPos, double yPos)	Fired when left mouse button is pressed down.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.

Event	Descriptions
void **OnLMButtonUp**(double xPos, double yPos)	Fired when left mouse button is released.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnLMButtonDblClk**(double xPos, double yPos)	Fired when left mouse button is double-clicked.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnRMButtonDown**(double xPos, double yPos)	Fired when right mouse button is pressed down.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnRMButtonUp**(double xPos, double yPos)	Fired when right mouse button is released.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnRMButtonDblClk**(double xPos, double yPos)	Fired when right mouse button is double-clicked.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.

Event	Descriptions
void **OnMMButtonDown**(double xPos, double yPos)	Fired when middle mouse button is pressed down.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnMMButtonUp**(double xPos, double yPos)	Fired when middle mouse button is released.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnMMButtonDblClk**(double xPos, double yPos)	Fired when middle mouse button is double-clicked.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnMouseMove**(double xPos, double yPos)	Fired when mouse gets moved.
Parameters	
xPos	Horizontal mouse position.
yPos	Vertical mouse position.
void **OnNewDocument**(BSTR szFileName)	Fired when new file is loaded.
Parameters	
szFileName	New filename.
void **CrossProbeEvent** (shortNEventType)	Fired when cross-probe event occurred.

Event	Descriptions
Parameters	
nEventType	**0** - Change in entity selections **1** - Zoom Selected command being invoked **2** - Show net connectivity command being invoked
void **BasefileHperlinkEvent** (shortNEventType, short nArgl, 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: **0** - none **1** - Horizontal flip **2** - Vertical flip **3** - 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
long **EntityColor**	Current EntityColor (COLORREFvalue)
long **PenStyle**	Current Pen Style
long **LineWidth**	Current line Width

Methods

Method	Description
void **TestMarkup**(BSTRsz FileName)	Load specified file and enter Markup mode (for testing purposes).
Parameters	
szFileName	File to load.
void **Open()**	Opens Markup file.
boolean **EnterMarkupmode** (OLE_HANDLE hVcetControl)	Enter Markup mode. **Return Value**: TRUE - success FALSE - otherwise
Parameters	
hVcetControl	Handle of the VCET control window.
long **NotifyProc** (long msg, long wParam, long 1Param)	Called by VCET control notify procedure. **Return Value**: Message specific.
Parameters	
msg	Message to process.
wParam	Message WPARAM.
1Param	Message LPARAM.
void **Save()**	Save current Markup in file.
void **SaveAs()**	Save current Markup under new name.
void **DrawLine()**	Draw line entity.
void **DrawArc()**	Draw arc entity.
void **DrawBox()**	Draw box entity.
void **DrawCircle()**	Draw Circle entity.
void **DrawFilledBox()**	Draw filled box entity.

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

boolean **ExitMarkupMode()**	Exit Markup mode. **Return Value**: TRUE - exit successful FALSE - user cancelled operation
boolean **IsUndoAvailable()**	**Return Value**: Returns whether there is an operation to undo or not.
long **GetControlHandle()**	**Return Value**: Returns handle of the Markup control window.
void **MeasureDistance()**	Measure distance between two points.
void **MeasureCumDistance()**	Measure cumulative distance.
void **MeasureArea()**	Measure area.
void **MeasureCalibrate()**	Currently unsupported.
void **ZoomFit()**	Zoom to fit.
void **Rotate**(short nDegrees)	Rotate Markups.
Parameters	
nDegrees	Rotation value, can be only 0, 90, 180 or 270.
void **Flip**(short nFlag)	Flip Markups.
Parameters	
nFlag	Flipping value.
0	No flipping.
1	Flip horizontal.
2	Flip vertical.
3	Flip both.
boolean **ResetAction()**	Reset current action. **Return Value**: **TRUE** - if action was reset from adding entity to none **FALSE** - otherwise

void **ShowInfo()**	Show Markup information.
void **CreateNew()**	Open new Markup.
void **SetFgBgColor**(boolean fBackGroundColor, long color) **Parameters**	
fBackGroundColor	TRUE/FALSE
color	RGB color value.
void **DeleteSelEntities()**	Delete selected Markup entities.
boolean **CopyToClipboard()**	Copy selected Markup entities to clipboard. **Return Value**: **TRUE** - if action was successful **FALSE** - otherwise
boolean **PasteFromClipboard()**	Paste Markup entities from clipboard into current active Markup. **Return Value**: **TRUE** - if action was successful **FALSE** - otherwise
void **OnMarkupConsolidate()**	Generate consolidated Markup from current loaded Markups.
void **OnModifyMarkupOnOff()**	Toggle - show/hide Markups.
long **GetFillStyle()**	Get current fill style. **Return Value**: 0 - No fill 1 - Solid fill 2 - Transparent fill
void **SetFillStyle**(long nNewValue) **Parameters**	Set current fill style.
nNewValue	0 - No fill 1 - Solid fill 2 - Transparent fill

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) **Parameters**	Set current snap type.
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

void **Draw3DVertexCoord()**	Draw 3d vertex coordinates entity.
void **Draw3DDistance()**	Draw 3D measurement distance entity.
void **Draw3DArc()**	Draw 3D measurement arc entity.
void **Draw3DAngle()**	Drawing 3D measurement angle entity.
void **EditText()**	Edit a text entity in the currently opened Markups.
void **EditNote()**	Edit a note entity in the currently opened Markups.
void **EditDimensions()**	Edit a 3D dimension entity (including distance, arc, angle and vertex coordinates) in the currently opened Markup.
void **HideDimensions()**	Hide all 3D dimension entities in the currently opened Markups.
void **DeleteDimensions()**	Delete all 3D dimension entities in the currently opened Markups.
boolean **IsThisEntityAvailable** (short nEntityID)	Determines if the given entity is available. **Return Value**: **TRUE** - if entity is available **FALSE** - 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 **IsThisEntitySelected** (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
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.
void **EditEntity**(long handle) **Parameters**	Edit the given entity.
handle	The entity handle.
short **GetEntityLineStyle**(long handle) **Parameters**	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
handle	The entity handle.
short **GetEntityLineWidth**(long handle) **Parameters**	Get the line width of the given entity. **Return Value**: The line width in pixels.
handle	The entity handle.
long **GetSelCound()**	Get the number of the selected entities in the currently opened Markups. **Return Value**: The number of the selected Markup entities.

AvPrintX Control

Properties

No properties.

Methods

Method	Descriptions
void **PrintIt** (OLE_HANDLE hVcetControl,OLE_HANDLE hMarkupControl, boolean bPrintDirect)	Print file along with Markups.
Parameters	
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.
void **PrintFile** (BSTR szFile Name,boolean bPrintDirect)	Prints specified file.
Parameters	
szFileName	Filename to print.
bDirectPrint	Flag indicating whether or not to show a dialog to user.
void **PrintPreview** (OLE_HANDLE hVcetControl, OLE_HANDLE hMarkupControl, boolean bPreviewDirect, boolean bWantFrame)	Enter Print Preview mode.
Parameters	
hVcetControl	Handle of the VCET control window (must not be NULL).
hMarkupControl	Handle of the Markup control window (must not be NULL).

Method	Descriptions
bPreviewDirect	Flag that indicates whether to show a dialog to user or not bWantFrame - flag for preview with frame or not.
void **PrintPreviewFile** (BSTR szFileName, boolean bPreviewDirect, boolean bWantFrame)	Enter Print Preview mode for specified file.
Parameters	
szFileName	Filename to preview.
bPreviewDirect	Flag that indicates whether to show a dialog to user.
bWantFrame	Flag for indicating preview with frame.
void **PreviewPrint()**	In Print Preview window - send Print command.
void **PreviewNextPage()**	In Print Preview window - go to next page.
void **PreviewPrevPage()**	In Print Preview window - go to previous page.
void **PreviewNumPage()**	In Print Preview window - switch between 1 and 2 page display.
void **PreviewZoomOut()**	In Print Preview window - zoom out.
void **PreviewClose()**	Close Print Preview window.
void **SetPrintPageOrientation** (boolean bLandscape)	Set page orientation for printing.
Parameters	
bLandscape	True if print as landscape, otherwise as portrait.
void **EnablePrintOptions**(short nOption, boolean bEnable)	Enable/disable a print option.

Method	Descriptions
Parameters	
nOption	Takes one of the following values: **0** - PRINTOPT_GENERAL **1** - PRINTOPT_HEADERSFOOTS **2** - PRINTOPT_WATERMARK **3** - PRINTOPT_MARGINS **4** - PRINTOPT_STAMPS **5** - PRINTOPT_PENSETTINGS **6** - PRINTOPT_PRINTTOFILE **7** - PRINTOPT_PRINTSETTINGS

Events

Event	Description
void **EndPrintPreview()**	Fired when user closes Print Preview window.
void **EndPrint()**	Fired when finished printing.

AutoVue CompareX Control

Properties

Property	Descriptions
BSTR **File1**	First source filepath.
BSTR **File2**	Second source filepath.
boolean **ShowScrollBar**	Flag indicating whether or not to show Scrollbar.
boolean **ShowMainToolbar**	Flag indicating whether or not to show Main toolbar.
boolean **ShowAuxiToolBar**	Flag indicating whether or not to show Auxiliary toolbar.

Property	Descriptions
boolean **ShowStatusBar**	Flag indicating whether or not to show Status bar.
boolean **EnablePopupMenu**	Flag indicating whether or not to enable Popup menu.
OLE_COLOR **CtlBgColor**	Background color.
short **Rotate**	Specifies current rotation value. Can be only 0, 90, 180, 270.
short **Flip**	**0** - No flipping **1** - Flip horizontal **2** - Flip vertical **3** - Flip both
short **Page**	Specifies current page.
short **ZoomType**	**0** - Zoom fit width **1** - Zoom fit height **2** - Zoom fit both **3** - Zoom fit resolution **4** - Zoom by factor (Default 1) **5** - Zoom custom: The following 4 properties are used to determine the extents
double **ExtMinX**	Minimal X coordinate of extents.
double **ExtMinY**	Minimal Y coordinate of extents.
double **ExtMaxX**	Maximal X coordinate of extents.
double **ExtMaxY**	Maximal Y coordinate of extents.
boolean **ViewAdditions**	If **TRUE**, shows the entities that are in the second file but not in the first file.
boolean **ViewDeletion**	If **TRUE**, shows the entities that are in the first file but not in the second file.
boolean **ViewUnchanged**	If **TRUE**, shows the entities that are in both files.

Methods

Method	Descriptions
void **ZoomFit()**	Zoom to fit.
void **ZoomPrevious()**	Undoes last zoom operation.
void **ZoomWidth()**	Zooms to fit width.
void **ZoomHeight()**	Zooms to fit height.
void **ZoomByFactor** (double factor) **Parameters** factor	Zooms by factor. Zooming factor.
void **ZoomFullResolution()**	Displays rasters using full resolution, for other formats same as ZoomFit
void **Print(**boolean bDirectPrint) **Parameters** bDirectPrint	Prints current document. Flag indicating whether or not to show a dialog to user
void **PrintPreview**(boolean bDirectPrint) **Parameters** bDirectPreview	Previews current document. Flag indicating whether or not to show a dialog to user.
void **PageNext()**	Displays next page.
void **PagePrevious()**	Displays previous page.
void **PageSelect()**	Selects page number.
void **SetContrastLight()**	Sets the image contrast to be light, this only applies to raster files.

Method	Descriptions
void **SetContrastNormal()**	Sets the image contrast to be normal, this only applies to raster files.
void **SetContrastDark()**	Sets the image contrast to be dark, this only applies to raster files.
void **SetContrastDarkest()**	Sets the image contrast to be darkest, this only applies to raster files.
void **GetContrast()**	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)
void **SetAntiAlias()**	Scales to grey, enhances the details of the raster file image that are viewed at less than 100% zoom.
void **InvertImage()**	Reverses the background and foreground colors of the raster file image.
void **ShowLayersDlg()**	Displays the Layer dialog.
void **ShowBlocksDlg()**	Displays the Blocks dialog.
void **ShowNamedViewsDlg()**	Displays the Named View dialog.
void **ShowXRefDlg()**	Displays the Xref dialog.

Events

Event	Description
void **StatusChanged** (short nNewStatus)	Fired when status changes.
Parameters	
nNewStatus	**New status value**: STATUSIDLE = 0x00 STATUSPROCESSING = 0x01 STATUSREADING = 0x02 STATUSREFRESHING = 0x04 STATUSREGENERATING = 0x08 STATUSREADINGFINISHED = 0x10
void **HelpString** (BSTR szMsg)	Help String for status indicator
Parameters	
szMsg	Help message
void **ExtentsChanged** (double extMinX, doubleextMinY, double extMaxX, double extMaxY)	Fired when extents change internally (not when properties change).
Parameters	
extMinX, extMinY, extMaxX, extMaxY	New extents' values.
void **PageChanged** (short nNewPage)	Fired when page changes internally.
Parameters	
nNewPage	New page value.
void **RotateChanged** (short nNewRotate)	Fired when rotate value changes internally.
Parameters	

nNewRotate	New rotate value.

void **FlipChanged** (short nNewFlip)	Fired when flip value changes internally.
Parameters	
nNewFlip	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 clean-ups
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
        ' Open file
        OleObj.Execute("FILE OPEN c:\windows\256color.bmp")
        ' 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")
    End If
        End Sub
```

DMAPI — Integrating with Document Management Systems

Document Management has gained increasing momentum over the past years. Document Management (DM) is now considered to be a strategic technology for organizations of all sizes. The reason for DM's overwhelming acceptance as a mainstream application is due to the incredible functionality it can deliver. Today, Document Management Systems (DMS) are effectively managing files created from a vast array of applications as well as allowing users to search for these files with great ease, speed and flexibility.

Viewing and Markup software packages play a very central role in every document management installation. AutoVue provides a complete API for integrating with DM, DMS, EDM, EDMS, Workflow, CDMS, ERP and PDM packages. This includes hooks for overriding document selections, the opening and closing of documents, saving documents etc. This API: named AutoVue/DM API can be used by either CSI software developers, AutoVue users, Document management developers or third-party developers and Systems Integrators in order to achieve the level of integration that is desirable with the above types of

packages. This API is a self-contained document that is presented as an integral part of AutoVue.

The DMAPI make extensive use of the concept of "Document ID's." A Document ID should be a unique identifier of any document in the DMS. The Document ID is distinct from the pathname of a locally accessible file. Almost all the calls to the DMAPI make reference to Document ID's.

Overall Capabilities of the AutoVue/DM API

DM systems are used in a company's quest to improve its efficiency by simplifying access to company documents. DM systems accomplish this daunting task by centralizing access to all documentation into a vault, ensuring that information may be easily classified and accessed.

To ensure the integrity of the materials present in the vault it becomes essential that the user be limited in his file access options — file name and path consistency must be maintained by restricting the user's control over file saves, to name but one example.

When the DM API is properly implemented, it will implement a user-defined DLL that will enable your DM system to fully take over AutoVue's file access and information functions. The API operates in nine different areas. Each one of those areas is explored in more detail in the following pages.

- AutoVue/DM Registration
- Document Selection
- Document Open
- Document Save
- Document Save As
- Document Close
- Document New
- DM Actions by AutoVue
- Document Get Properties

AutoVue/DM Registration

When AutoVue starts up and exits, it sends notification messages for the DM package.

AutoVue/DM Un-registration

When AutoVue starts up and exits, it sends notification messages for the DM package.

Document Select

Whenever the AutoVue user interface provides for a selection of a file, a Callback/Notification is issued in order for the DMS to provide its own file selection and searching capabilities. Most document Management systems will also allow the user to bypass the DM and use AutoVue's selection capabilities to access the local file system. The following User Interface actions provide the necessary hooks for the DM selection and searching capabilities:

View mode:

- File/Open
- File/Compare
- File/Overlay/Select
- File/MarkUp

Markup mode:

- File/Open
- Hyperlink/Establish/Data File/Browse

The selection procedure is expected to return a Document ID. Note that the document should not be checked out, copied out nor locked by the selection procedure. The “Open” procedure is used to access the document.

Document Open

Whenever AutoVue opens a file either after selection or automatically, a Callback/Notification is issued in order for the DMS to fetch the document (a read-only copy of the document is fetched. It is not a checkout with a lock) and to provide authorization and security checks. The following actions performed either by the user or automatically by AutoVue will generate such notifications:

View mode:

- Opening a document for viewing
- Opening a document for comparison
- Overlay selection.

Markup mode:

- Opening a Markup file
- Opening a hyperlinked data file

Document Save

AutoVue issues a Notification/Callback to inform the DM package of a Save operation. Depending on the rights of the user, the DM will either allow the saving or not. The Document Save notification would happen in the following cases:

View mode:

- Saving a scanned image.

Markup mode:

- Saving a Markup file

Document Save As

This is similar to the “Save” procedure, except that in this case the user wishes to create a new copy of the current document. It is currently used by AutoVue only for the Markup/Save As function.

Markup mode:

- Saving a Markup file under a new name

Document Close

All calls to the DMAPI’s Open procedure are matched by a call to the Close procedure.

Document New

Currently unused. For future use.

DM Actions Initiated by AutoVue

Currently unused. For future use.

Document Get Properties

AutoVue, once integrated with a DM package, sends request messages for some information that is needed. The DM then responds accordingly.

View mode:

- Document Name, Type, Format, and Description: AutoVue might make use of this information with its UI layout
- Get a list of Markups attached to the current document
- Get a list of associated documents (ex: Hybrid, fonts...)

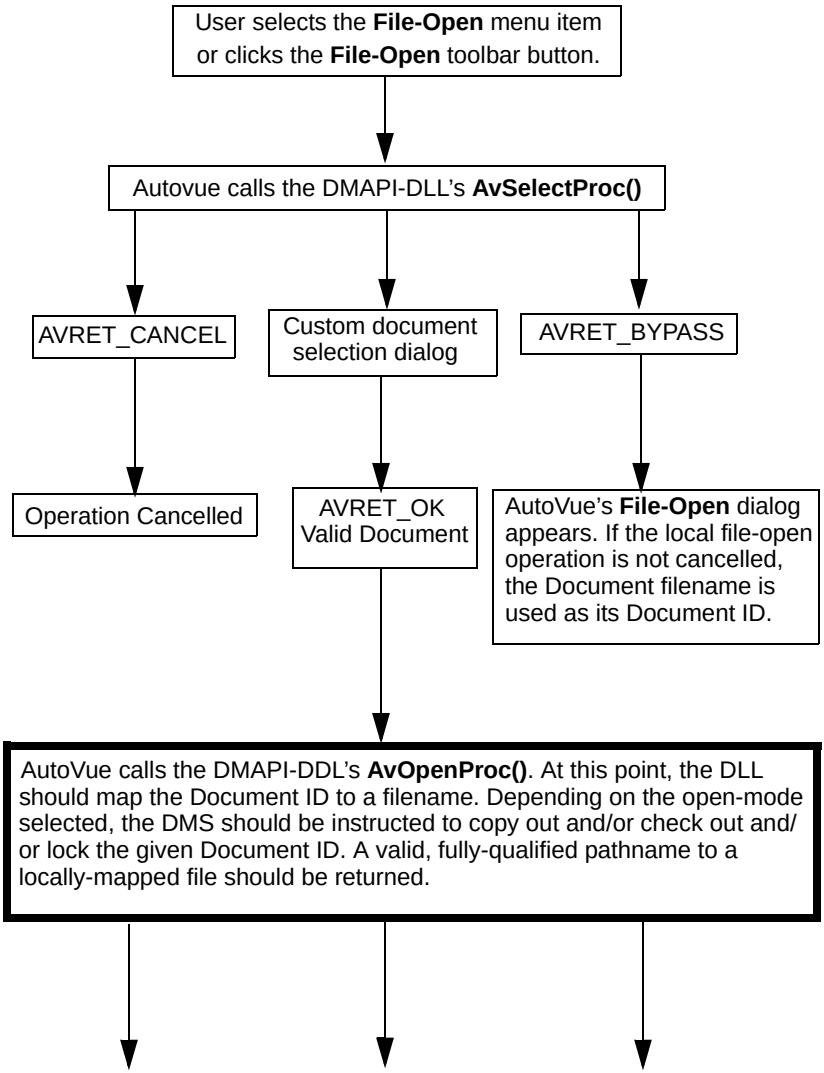
User Interface Considerations

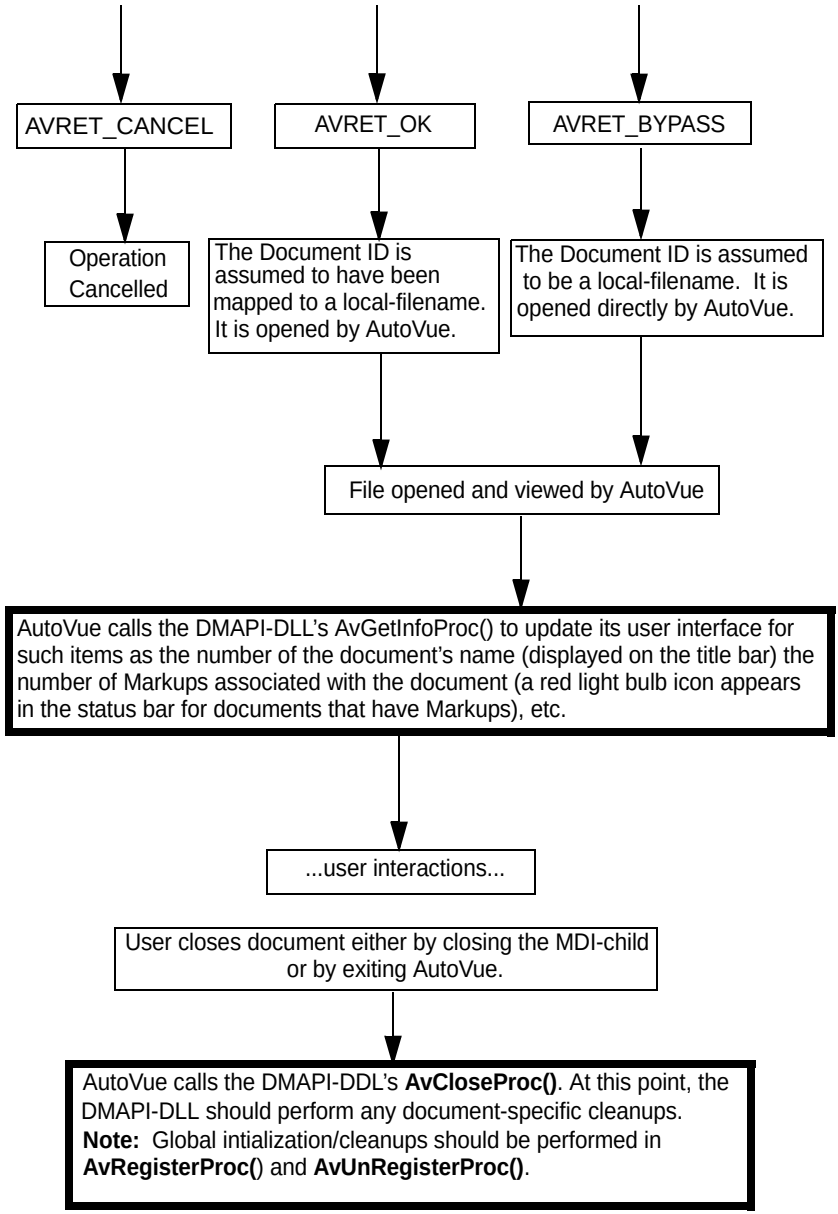
In order to ensure a solid and seamless integration with a DM, we recommend that certain capabilities be disabled within the AutoVue User Interface. This can be achieved through Scripting, DDE, or DLL Integration as described in this manual and Document files in the Docs subdirectory of AutoVue. These capabilities include:

- File/Browse
- File/Next
- File/Previous
- File/Associate

Flowchart Example: Viewing

The following flowchart describes the typical calling sequence of the entry-point functions in the DMAPI-DLL when a document is opened for viewing.



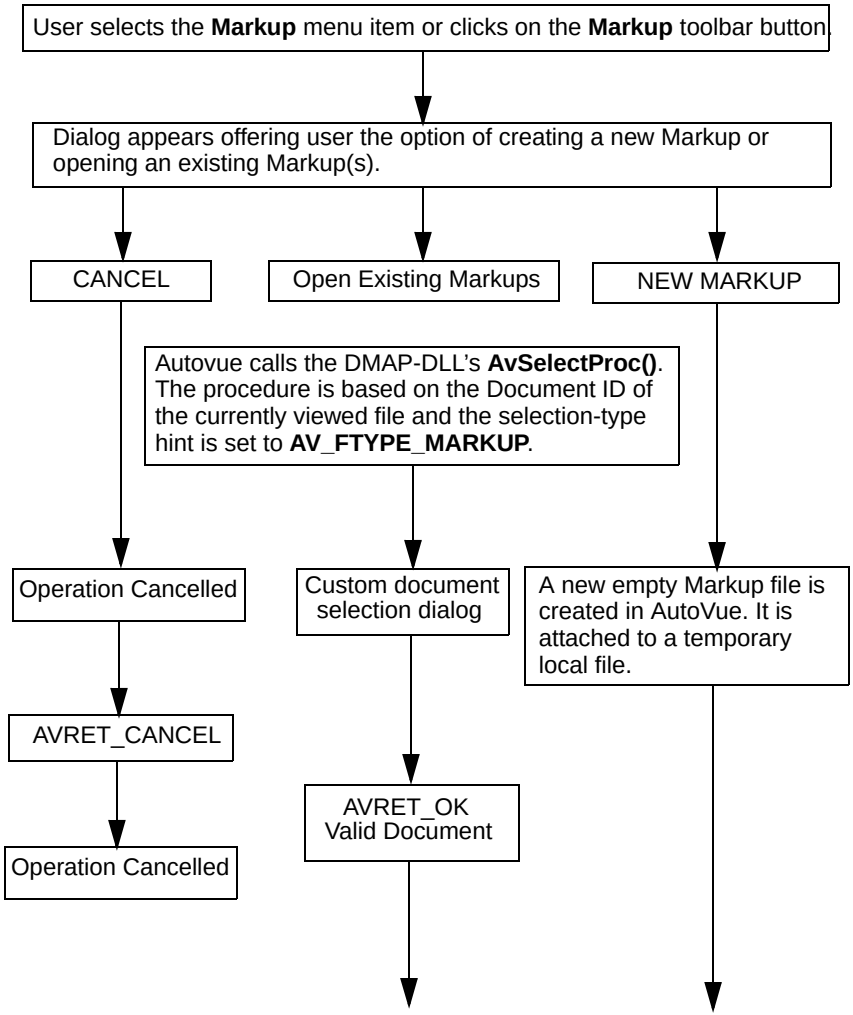

AVRET_CANCEL
AVRET_OK
AVRET_BYPASS
Operation Cancelled
The Document ID is assumed to have been mapped to a local-filename. It is opened by AutoVue.
The Document ID is assumed to be a local-filename. It is opened directly by AutoVue.
File opened and viewed by AutoVue
AutoVue calls the DMAPI-DLL's AvGetInfoProc() to update its user interface for such items as the number of the document's name (displayed on the title bar) the number of Markups associated with the document (a red light bulb icon appears in the status bar for documents that have Markups), etc.
...user interactions...
User closes document either by closing the MDI-child or by exiting AutoVue.
AutoVue calls the DMAPI-DDL's **AvCloseProc()**. At this point, the DMAPI-DLL should perform any document-specific cleanups.
Note: Global intialization/cleanups should be performed in **AvRegisterProc()** and **AvUnRegisterProc()**.

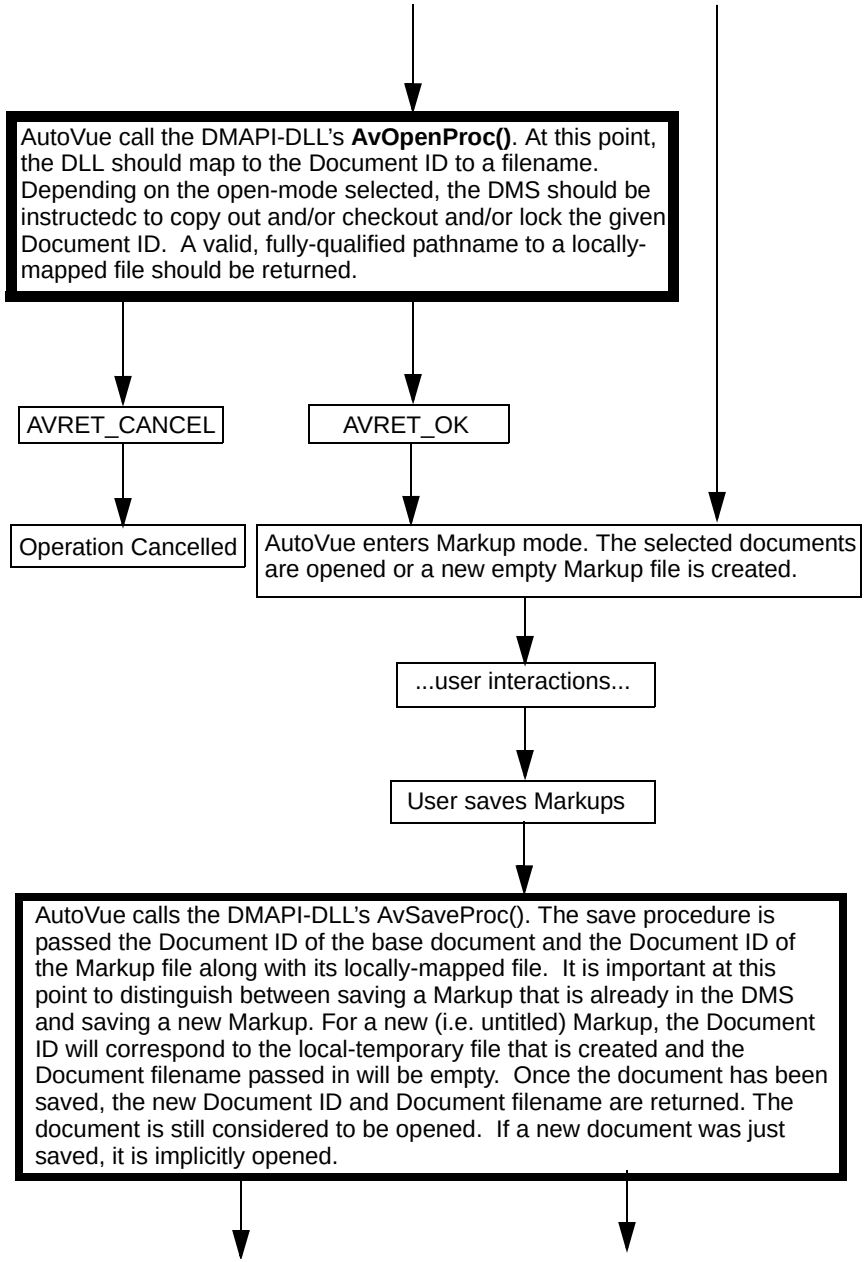
Note ***Note:*** *Under some circumstances AutoVue will directly call AvOpenProc() without calling AvSelectProc(). This can happen if AutoVue is launched from the command line with a filename or an ODMA-like filename, or if AutoVue is instructed to open a file through any of the API methods to view a file. In this case, since a filename (or ODMA_like filename) is already supplied, the selection procedure is unnecessary, and the open procedure is called directly. An ODMA filename considered to be any string starting with the characters "::ODMA" (i.e., two colons followed by "ODMA") - is passed unparsed to the DMAPI-DLL.*

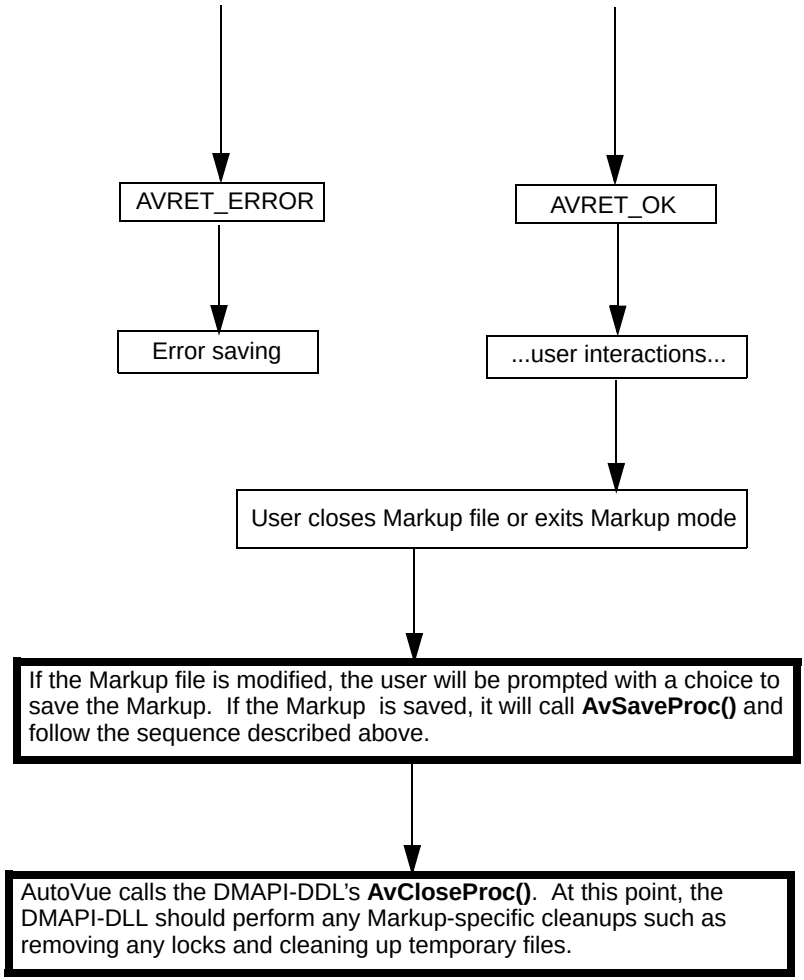
Flowchart Example: Markup

The following flowchart describes the typical calling sequence of the entry-point functions in the DMAPI-DLL when the user enters Markup mode.

Note: *The handling of the Save-As function is similar to the Save function.*




AutoVue call the DMAPI-DLL's **AvOpenProc()**. At this point, the DLL should map to the Document ID to a filename. Depending on the open-mode selected, the DMS should be instructedc to copy out and/or checkout and/or lock the given Document ID. A valid, fully-qualified pathname to a locally-mapped file should be returned.
AVRET_CANCEL
AVRET_OK
Operation Cancelled
AutoVue enters Markup mode. The selected documents are opened or a new empty Markup file is created.
...user interactions...
User saves Markups
AutoVue calls the DMAPI-DLL's AvSaveProc(). The save procedure is passed the Document ID of the base document and the Document ID of the Markup file along with its locally-mapped file. It is important at this point to distinguish between saving a Markup that is already in the DMS and saving a new Markup. For a new (i.e. untitled) Markup, the Document ID will correspond to the local-temporary file that is created and the Document filename passed in will be empty. Once the document has been saved, the new Document ID and Document filename are returned. The document is still considered to be opened. If a new document was just saved, it is implicitly opened.


AVRET_ERROR
AVRET_OK
Error saving
...user interactions...
User closes Markup file or exits Markup mode
If the Markup file is modified, the user will be prompted with a choice to save the Markup. If the Markup is saved, it will call **AvSaveProc()** and follow the sequence described above.
AutoVue calls the DMAPI-DDL's **AvCloseProc()**. At this point, the DMAPI-DLL should perform any Markup-specific cleanups such as removing any locks and cleaning up temporary files.

Detailed API for AutoVue/DM Integration

AutoVue provides hooks that allow it to be easily integrated with DMS. This is done through a user-defined DLL with a pre-defined set of entry points that AutoVue will call whenever document actions are performed. The following section describes the entry point functions and API of the user DLL. The next section describes how to integrate the user DLL with AutoVue. Descriptions of the command line, scripting, DDE and VCET interfaces are provided elsewhere.

The interface with the DMS makes use of Documents ID's. AutoVue treats these as opaque quantities but interacts with the DMS using these ID's. Most DMS's index, in one way or another, the document database. These document ID's can be considered to be unique identifiers for each document in the database. The AutoVue/DM integration uses null-terminated strings to represent these IDs. The DMS may use any representation it wishes for these ID's, the only restriction being that it is limited to AV_MAX_DOCID bytes, including the null termination. To actually access a document, AutoVue requests the DMS to fetch a copy of the document, given its document ID. When checking out the document, the DMS should make the file available to AutoVue, which returns the physical document name of the checked out file. For most operations, in addition to providing the Document ID, AutoVue also provides as hints to the DMS: the Document ID of the base file and what type of document the ID corresponds to.

For example, to select the Markups corresponding to a certain document, AutoVue would supply: the document ID of the base file (i.e. the ID of the document being marked up) and a flag indicating the document to be selected is a Markup file.

The DMS may, for example, use these hints in its user interface to restrict the options available to the user or to provide a limited set of files to choose, or the DMS may choose to ignore these hints.

API description for AutoVue/DM integration

```
/********************CONSTANTS*****************************/
/**********************************************************/
// Function Return Codes.
#define     AVRET_OK            0
```

```
#define     AVRET_CANCEL    1
#define     AVRET_BYPASS    2
#define     AVRET_EACCESS   3
#define     AVRET_INUSE     4
#define     AVRET_USERINT   5
#define     AVRET_VETO      6

// Maximum length of a document ID, in bytes.
#define    AV_MAX_DOCID   255

// Maximum length of a filename, in bytes
#define   AV_MAX_DOCNAME   255

// File Open Modes.
#define   AV_OPEN_MODE_RDONLY   0x0001
#define   AV_OPEN_MODE_RDWR     0x0002
#define   AV_OPEN_MODE_SILENT   0x0004

// FileType Hints
typedef enum avfiletype_t {
AV_FTYPE_UNKNOWN = 0,
AV_FTYPE_BASE,
AV_FTYPE_ASSOCFILE,
AV_FTYPE_COMPARE,
AV_FTYPE_CONVERSION,
AV_FTYPE_FONT,
AV_FTYPE_MARKUP,
AV_FTYPE_MARKUPNOTE,
AV_FTYPE_OVERLAY,
AV_FTYPE_SCRIPT,
AV_FTYPE_SYMBOL,
AV_FTYPE_XREF,
```

```
} AV_FileType;

typedef enum dmaction_t {
AV_DMACTION_UNKNOWN = 0,
AV_DMACTION_VIEW_PROPERTIES,
AV_DMACTION_EDIT_PROPERTIES,
AV_DMACTION_LAUNCHAPP,
} AV_DMAction;

// Stats of the current session with a document.
typedef struct SessionStats_t {
// Time in seconds document was in use
DWORD dwUseTime;
// Time in seconds document was edited
DWORD dwActiveTime;
// Number of pages printed.
DWORD dwPagesPrinted;
}SESSIONSTATS, *PSESSIONSTATS,
__near *NPSESSIONSTATS, __far *LPSESSIONSTATS;
```

Function Descriptions

LRESULT CCALLBACK AvRegisterProc(

```
LPDWORD     hConv;
HWND        hwndAutoVue;
LPCSTR      szAutoVue;
```

);

Purpose

This function is called when AutoVue starts up. Connection to the DMS and userlogins can be done at this point.

Parameters

Parameter	Description
hConv (out)	The conversation ID, used in all subsequent transactions
hwndAutoVue (in)	The window handle of AutoVue's main window
szAutoVue (in)	This will always be the string: "AutoVue14"

Return

Value	Description
AVRET_OK	On success.
AVRET_EACCESS	On failure.

LRESULT CCALLBACK AvUnRegister Proc(

DWORD hConv;

);

Purpose

This function is called just before AutoVue exits. The user can be logged off the DMS at this point, and general resource and memory freeing should also be done. Note that after this function has been called, the conversation ID, hConv, is no longer valid.

Parameters

Parameter	Description
hConv (in)	The conversion ID.

Return

Value	Description
AVRET_OK	On success.
AVRET_EACCESS	On failure.

LRESULT CCALLBACK AvSelectProc(

DWORD	hConv;
HWND	hwndCtl;
AV_FileType	eType;
WORD	wMode;
LPCSTR	szBaseDocID;
LPCSTR	szDocID

);

Purpose

This function is called when the user is required to select a file. If intercepted by the DMS, the DMS should provide its own file selection dialog. File selections occur in several places in AutoVue (e.g. to open a document, select a Markup file, select an overlay etc.). The type of selection is specified in the eType

enumeration. If a selection is to be done with respect to the base document file (for all cases except AV_FTYPE_BASE) the ID of the base document will be passed. For AV_FTYPE_BASE, the ID is not used. Note that the Selection procedure does not actually check out a file, it simply returns a document ID. When AutoVue needs to access the file, it calls AvOpenProc() to check out the file based on its ID.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in	The VCET Control of the base document.
eType (in)	The type of selection. One of the AV_FileType enumeration.
wMode (in)	AV_MODE_OPEN_RDONLY to open the file in a read only (view) mode, or AV_MODE_OPEN_RDWR to open the file for both reading and writing. **Note** It is the responsibility of the DMS to ensure that the user as the necessary permissions to access the document. If the AV_MODE_OPEN_SILENT bit is set, then the DMS should not, if possible, display any user interface.
szBaseDocID (in)	The base document. If eType is AV_FTYPE_BASE, then szBaseDocID is NULL, otherwise it corresponds to the base document with respect to which the section operation is being performed.
szDocID (out)	ID of the selected document. If the callback fails, not returning AVRET_OK, this field will have no meaning

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	If the operation was cancelled.

AVRET_BYPASS	If user is allowed to bypass the DMS's file selection procedure and select a file locally. In this case, AutoVue will provide its own File Selection dialog.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_INUSE	If the document is in use and is currently unavailable.
AVRET_USERINT	If the action cannot be accomplished without user interaction.This is applicable if the AV_MODE_OPEN_SILENT flag is set in wMode.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvOpenProc(

DWORD	hConv;
HWND	hwndCtl;
AV_FileType	eType;
WORD	wMode;
LPCSTR	szBaseDocID;
LPCSTR	szDocID;
LPSTR	szDocName

);

Purpose

This function is called when AutoVue needs to access the file. The document ID is passed to the DMS; this ID is normally obtained through a previous call to the AvSelectProc() or Av NewProc() function. The DMS should (if there are no error conditions) make the file available to AutoVue by creating a copy of the document on a local or networkmapped drive. The document's filename returned in the szDocName parameter. Documents are opened in several places in

AutoVue (to open a document, select a Markup file, etc.). The type of selection is provided as a "hint" to the DMS in the AV_File Type enumeration. If a selection is to be done with respect to the base document file (for all cases except AV_ FTYPE_BASE) the base document's ID will be passed. For AV_ FTYPE_BASE, the ID is not used.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eType (in)	The type of selection. One of the AV_FileType enumeration.
wMode (in)	AV_MODE_OPEN_RDONLY to open the file in a readonly (view) mode, or AV_MODE_OPEN_RDWR to open the file for both reading and writing. Note that it is the responsibility of the DMS to ensure that the user has the necessary permissions to access the document. If the user does not have the necessary permissions, the DMS may refuse the request, returning AVRET_EACCESS. The bit, AV_MODE_OPEN_SILENT can be set, in which case the DMS should not require user interaction to complete the request.
szBaseDocID (in)	The base document. If eType is AV_FTYPE_BASE, then szBaseDocID is NULL, otherwise it corresponds to the base document with respect to which the section operation is being performed.
szDocID (in)	ID of the document to open.
szDocName (out)	The fully qualified pathname of the document checked out by the DMS. If the callback fails, not returning AVRET_OK, this field will have no meaning.

Return

Value	Description

AVRET_OK	On success.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_INUSE	If the document is in use and is currently unavailable.
AVRET_USERINT	If the action cannot be accomplished without userinteraction.This is applicable if the AV_MODE_OPEN_SILENT flag is set in wMode.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvSaveProc(

DWORD	hConv;
HWND	hwndCtl;
AV_FileType	eType;
LPCSTR	szBaseDocID;
LPCSTR	szDocID;
LPSTR	szNewDocID

);

Purpose

This function is called when AutoVue needs to save a document after modification, e.g. when Markups are saved. The document ID is passed to the DMS, this ID is normally obtained through a previous call to the AvSelectProc() or the AvNewProc() function. A new document ID is returned which AutoVue will use for all subsequent operations on the document. The new ID may or may not be the same as the old ID. The new ID replaces the previous document ID and AutoVue is able to use it without having to subsequently call AvOpenProc().

Documents are saved/exported in several places in AutoVue (e.g. saving Markup files, converting formats, exporting Markup notes). The type of export is

specified and provided as a "hint" to the DMS in the AV_FileType enumeration. The ID of the base document is also passed as a hint to the DMS.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eType (in)	The type of selection. One of the AV_FileType enumeration.
szBaseDocID (in)	The base document, corresponding to the base document with respect to which the save operation is being performed.
szDocID (in)	ID of the document to save.
szNewDocID (out)	The new ID of the document. Note that if the save operation succeeds, AutoVue will no longer use szDocID, but will use szNewDocID for all subsequent document operations.

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	If the operation was cancelled.
AVRET_BYPASS	If user is allows to bypass the DMS's file selection procedure and select a file locally. In this case, AutoVue will provide its own File Selection dialogs.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvCloseProc(

DWORD	hConv;
HWND	hwndCtl;
AV_FileType	eType;
LPCSTR	szBaseDocID;
LPCSTR	szDocID;
LPCSTR	szDocName;
LPSESSIONSTATS	lpSS

);

Purpose

This function is called when AutoVue needs to close an opened document. The document ID is passed to the DMS. This ID is normally obtained through a previous call to the AvSelectProc() or the AvNewProc() function. The ID of the base document is also passed as a hint to the DMS.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eType (in)	Hint: The type of file being closed.
szBaseDocID (in)	The base document, corresponding to the base document with respect to which the save operation is being performed.
szDocID (in)	ID of the document to close.

szDocName (in)	The fully qualified pathname of the document available locally. Note that if the close operation succeeds, this document may no longer be valid. For example, the DMS may choose the move or delete the file locally. The document should be considered closed, and if it needs to be accessed again, AutoVue will reopen the document.
lpSS (in)	Document statistics: • The total time spent in the drawing. • If the document was checked out readwrite, the total time spent in edit mode. • The number of pages printed. • The DMS can use this information to track document usage.

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	If the operation was cancelled.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvNewProc(

DWORD	hConv;
HWND	hwndCtl;
AV_DOCNEW	eType;
WORD	wMode;
LPCSTR	szBaseDocID;

```
LPCSTR          szDocID;
LPCSTR          szDocLocation
);
```

Purpose

This function is called when the user is required to create a new document. New documents are created in AutoVue in View mode when performing file format conversions, and in Markup mode when creating new Markups. The type of file being created is provided as a hint to the DMS in the eType enumeration. In addition, the ID of the base document is also passed as a hint to the DMS. If the document already exists, the current location of the document is passed in szDocLocation. This is given as a hint to the DMS to keep the document in this location. Note that some DMS's may ignore this hint and move the document into the repository anyway. This parameter may be NULL, in which case the DMS should determine the document's location. Note that this procedure does not actually check out a file; it simply returns a document ID. When AutoVue actually needs to access the file, it will call AvOpenProc() to check out the file based on its ID.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eType (in)	The type of file to create. One of the AV_FileType enumeration.
wMode (in)	AV_MODE_OPEN_RDONLY to create a readonly document (View mode), or AV_MODE_OPEN_RDWR to open the file for both reading and writing. Note that it is the responsibility of the DMS to ensure that the user has the necessary permissions to access the document. AV_ MODE_OPEN_SILENT will be set if no user interaction is desired.

szBaseDocID (in)	The base document's ID, passed as a hint to the DMS.
szDocID (out)	ID of the new document. If the callback fails, not returning AVRET_OK, this field will have no meaning
szDocLocation (out)	If the document already exists locally, the pathname of the document is passed to the DMS. If NULL, the DMS should determine the document's storage location.

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	If the operation was cancelled.
AVRET_BYPASS	If user is allowed to bypass the DMS's file selection procedure and select a file locally. In this case, AutoVue will provide its own “Documentnew” dialogs.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_USERINT	If the action cannot be accomplished without userinteraction.This is applicable if the AV_MODE_OPEN_SILENT flag is set in wMode.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvSaveAsProc(

DWORD	hConv;
HWND	hwndCtl;
AV_FileType	eType;
LPCSTR	szBaseDocID;

```
LPCSTR          szDocID;
LPCSTR          szDocName;
LPSTR           szNewDocID;
);
```

Purpose

This function is called when AutoVue needs to save a document after modification, but with a new filename (e.g. when Markups are saved). The document ID is passed to the DMS; this ID is normally obtained through a previous call to the AvSelectProc() or the AvNewProc() function. A new document ID is returned. Note that in contrast with the AvSaveProc(), following a successful call to AvSaveAsProc() the calling application may have two different document IDs to work with. This is different than the situation with AVSaveProc() where the new ID replaces the old one in the current session. The state of the document specified by the old ID remains the same after the call. The document specified by the new ID will be in the closed state following the call. A typical sequence of operations AutoVue might follow in response to the user selecting **File/Markup/SaveAs** would be:

1. AutoVue passes the currently open document's ID to AvSaveAsProc(). If NULL is returned for the new ID then the sequence is complete. If a new ID for the document is returned then continue with the steps below.
2. AutoVue calls AvOpenDoc() on the new ID. This returns a new filename for the document.
3. AutoVue saves the document to the new filename and then calls AVSaveProc on the new ID to indicate to the DMS that the new document should be saved in the document repository.
4. AutoVue calls AvCloseProc() on the old ID.
5. AutoVue can now forget about the old ID and use the new ID for all subsequent operations on the file. When the current session is completed it will call AvCloseProc() on the new ID. Documents are saved/exported in several places in AutoVue (e.g. saving MarkUp files). The type of export is specified and provided as a "hint" to the DMS in the AV_FileType enumeration. The ID of the base document is also passed as a hint to the DMS.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eType (in)	The type of selection. One of AV_DOCSAVE_xxx
szBaseDocID (in)	The base document, corresponding to the base document with respect to which the save operation is being performed.
szDocID (in)	ID of the document to save.
szNewDocID (out)	The new ID of the document. In contrast with the AvSaveProc(), if the Save As operation succeeds, AutoVue may have two open document ID's to work with.

Return

Parameter	Description
AVRET_OK	On success.
AVRET_CANCEL	If the operation was cancelled.
AVRET_BYPASS	If user is allowed to bypass the DMS's file selection procedure and select a file locally. In this case, AutoVue will provide its own **file- selection** dialogs.
AVRET_EACCESS	If the user does not have the authorization.
AVRET_VETO	If the operation is vetoed.

LRESULT CCALLBACK AvDMActionProc(

DWORD	hConv;
HWND	hwndCtl;
AV_DMAction	eAction;
AV_FileType	eType;
LPCSTR	szBaseDocID;
LPCSTR	szDocID

);

Purpose

This function is called when AutoVue needs to activate a certain function directly in the DMS. As parameters, the document ID to process, its type and the associated base document (if any) are passed. Currently AutoVue can request three actions from the DMS, and these are enumerated in **AV_DMAction**:

- **AV_DMACTION_VIEW_PROPERTIES**
  View the document properties associated with szDocID. These properties are DMS dependent, but normally include information such as:
  - Document name
  - Document description
  - Project
  - Revision
  - Author

  The DMS should display these properties in a viewonly (nonedit) mode.

- **AV_DMACTION_EDIT_PROPERTIES**
  This action should invoke the DMS's editproperties function. Again, the implementation is DMS-specific. Note that the DMS should verify that the user has the appropriate permissions to modify the properties of a document.

- **AV_DMACTION_LAUNCHAPP**

This action should invoke the DMS's filelaunching capabilities. The DMS should verify that the user has the appropriate permissions to launch applications with the given document.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eAction (in)	The type of action to initiate from the DMS.
eType (in)	This will always be the string: "AutoVue14"
szBaseDocId(in)	Provided as a hint: the base document, corresponding to the document szDocID.
szDocID (in)	ID of the document with which the requested action should be performed.

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	Operation was cancelled by the user in the DMS.
AVRET_BYPASS	If user is allowed to bypass the DMS. In this case, AutoVue will provide its own user interface.
AVRET_EACCESS	If the user does not have the required authorization
AVRET_VETO	If the operation is vetoed.

LRESULT PCALLBACK AvGetDocInfoProc(

DWORD	hConv;
HWND	hwndCtl;
int	eType;
int	eInfo;
LPCSTR	szBaseDocID;
LPCSTR	szDocID;
LPSTR	szBuf;
WORD	wBufLen;

);

Purpose

This function is used to retrieve information from the document management system.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eInfo (in)	The type of action to initiate from the DMS. **eInfo** can have one of the below possible values.
Values	
AV_DMINFO_GETDESC	Get the object description.

AV_DMINFO_GETNUM MARKUPS	Get number of markups associated with current object.
AV_DMINFO_SUPPORTS MULTICONTENT	Is document multi-content object?
AV_DMINFO_GETNUM CONTENTS	Get number of contents in this multi-content object.
AV_DMINFO_CONTENTDOCID	Get multi-content document ID.
AV_DMINFO_GETCONTENT NUMBER	Get index of multi-content object.
AV_DMINFO_GETATTRIBKEYS	Get list of attribute keys for this object.
AV_DMINFO_GETATTRIBKEY VALUE	Get attribute value for this object.
AV_DMINFO_GETUSERNAME	Get username logged into DMS.
AV_DMINFO_GETSESSIONINFO	Get login session information for logged in user.
AV_DMINFO_ISUSERADMIN	Does logged in user have administrative priviledges?
AV_DMINFO_GUI	GUI information print before/after.
AV_DMINFO_GETDOMAIN	Get domain name where DMS server is installed.
AV_DMINFO_EXT_DOCBASE NAME	Get the docbase name.
AV_DMINFO_EXT_HOSTNAME	Get the hostname of the content server.
AV_DMINFO_EXT_CURDOCID	Get the document ID of the current document.
AV_DMINFO_EXT_BASEDOCID	Get the base document ID for a given markup.
AV_DMINFO_EXT_MASTER_ NUMBER	Get the number of master markups.
AV_DMINFO_EXT_ CONSOLIDATED_NUMBER	Get the number of consolidated markups.

AV_DMINFO_EXT_REMOTE_ COMMENT	Request for remote comments.
AV_DMINFO_EXT_OBJECT_ EXISTENCE	Check if a document exists.
AV_DMINFO_EXT_ PACKAGEFILE_SUPPORT	Get package file support capability.
AV_DMINFO_EXT_GET_DCMT_ USER	Get the document user for a given user.
AV_DMINFO_EXT_GET_USER_ OS_ NAME	Get the OS name for current user.
AV_DMINFO_EXT_GET_ OWNER_OS_NAME	Get the OS name for document owner.
AV_DMINFO_EXT_SET_OWNER	Change to owner of a markup.
AV_DMINFO_EXT_SET_CU_ PERMISSION	Set permission for current user.
AV_DMINFO_SUPPORTS_ APPROVALS_ONLY	Supports AV_FTYPE_MARKUP_ APPROVALS_ONLY file type.
eType (in)	Provided as a hint: The type of document in szDocId
szDocID (in)	ID of the document with which the requested action should be performed.
szBaseDocID(in)	Provided as a hint: The base document corresponding to szDocID.
szBuf(out)	The buffer is filled with the requested information.
wBufLen(in)	Size of buffer szBuf passed in.

Return

Value	Description
AVRET_OK	On success.

AVRET_CANCEL	Operation was cancelled by the user in the DMS.
AVRET_BYPASS	If user is allowed to bypass the DMS. In this case, AutoVue will provide its own user interface.
AVRET_EACCESS	If the user does not have the required authorization
AVRET_VETO	If the operation is vetoed.

LRESULT PCALLBACK AvSetDocInfoProc(

DWORD	hConv;
HWND	hwndCtl;
int	eType;
int	eInfo;
LPCSTR	szBaseDocID;
LPCSTR	szDocID;
LPSTR	szBuf;

);

Purpose

This function is invoked to set information from the document management system.

Parameters

Parameter	Description
hConv (in)	The conversation ID.
hwndCtl (in)	The VCET Control of the base document.
eInfo (in)	The type of action to initiate from the DMS.

eType (in)	Provided as a hint: The type of document in szDocId
szDocID (in)	ID of the document with which the requested action should be performed.
szBaseDocID(in)	Provided as a hint: The base document corresponding to szDocID.
szBuf(out)	The buffer is filled with the requested information.

Return

Value	Description
AVRET_OK	On success.
AVRET_CANCEL	Operation was cancelled by the user in the DMS.
AVRET_BYPASS	If user is allowed to bypass the DMS. In this case, AutoVue will provide its own user interface.
AVRET_EACCESS	If the user does not have the required authorization
AVRET_VETO	If the operation is vetoed.

Configuring the AutoVue DMAPI Integration DLL

AutoVue's configuration file, AVWIN.INI, is normally in the user's Windows directory. The section [DMS] lists the DLL's that AutoVue will load and call in the format:

```
[DMS]
DMSDLL=dllpathname
```

Where dllpathname specifies the filename of the DLL. If the DLL is not in the standard search paths (i.e. the directory of Avwin.exe, the Windows directory or the Windows system directory) then a fully qualified pathname should be specified. AutoVue reads Avwin.ini on startup and will call the DM functions in the DLL listed in the [DMS].

Getting More Information

Several examples of integrations are provided in the sample files that were installed on your computer during the AutoVue installation.

Further details are available in the AutoVue API section of this manual.

Integration can be an economical alternative that provides enhanced functionality and interoperability. Cimmetry Systems can help you integrate AutoVue with your organization's existing applications. For more information, contact Cimmetry Systems Corp.

Sales: +1 514 735-3219 or 1-800-361-1904

E-mail: info@cimmetry.com

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\av\avwin**.
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 Version 6 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 form 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.

Numerics

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