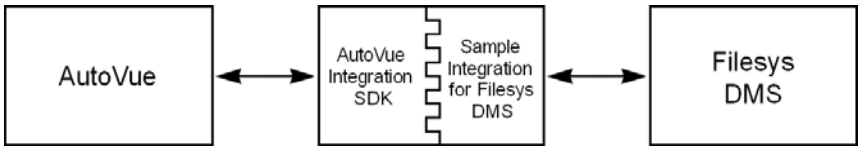
Sample Integration for Filesys DMS

User Guide

Contents

Introduction

The **Sample Integration for Filesys document management system** (DMS) provides an interface between the Filesys DMS and the **AutoVue Client Server Edition** (AutoVue CSE). This interface enables you to add powerful viewing and markup capabilities to the Filesys DMS.



Sample Integration for Filesys DMS and AutoVue provide you with basic and advanced functionalities:

- Document viewing of native formats
- Retrieve document attributes
- Create, save and review markups.
- Browse Filesys DMS repository
- Search Filesys DMS repository
- Compare document version
- Convert documents to other formats
- Override behavior of single DMAPI without need to recompile the code

Read this manual if you want to get familiar with the AutoVue Integration SDK, or if you are a developer who wants to integrate AutoVue with your specific document management system. This manual guides you through the developement of the Sample Integration for Filesys DMS and shows you the steps you need to follow to complete the integration process.

Note: The AutoVue Integration SDK only supports AutoVue CSE.

Functional Overview

The Sample Integration adds document viewing and markup capabilities to Filesys DMS. It provides a seamless interface between Filesys DMS and AutoVue via a Web browser in an intranet/Internet environment.

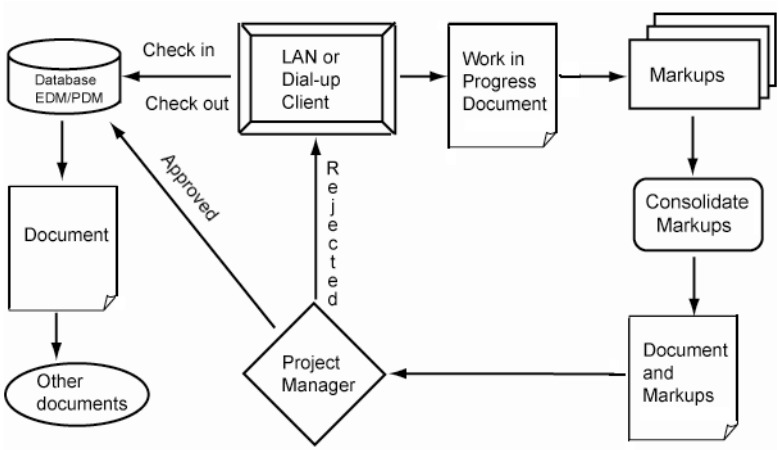
Sample Integration for Filesys DMS and AutoVue provides you with the following features and capabilities, locally or remotely via a Web browser:

- View documents securely in their native format without editing them.
- View more than 200 2D & 3D engineering and business document formats.

- Work with multiple markup layers and files simultaneously.
- Create markups/redlines/annotations directly on stored documents or as renditions using a rich set of annotation tools.
- Consolidate several markup files into a single markup file.
- Associate markups with a specific document revision. Markups may be migrated to new revisions as required.
- Compare different revisions of engineering drawings graphically.
- Convert documents to other formats.
- Print documents with header, footer, and watermark information queried from specified document attributes.
- Override the behavior of single DMAPI without the need to recompile the code.

Why do DMS Users Need a Viewing and Markup Tool?

Typically, in an organization, a document has a life cycle and is routed to several people as part of a workflow cycle. The following is an example of a possible workflow cycle.



There is a minimum of three types of people that interact with a document:

- **Creator/Author of a document**: The creator is usually the person responsible for creating or modifying a document with an editing application such as Microsoft Word or AutoCAD.

- **Reviewer of document**: This individual usually reviews a document and provides comments to the author or other reviewer. In a paper-based environment, the document is printed on paper and sent to a list of reviewers. Each reviewer provides feedback in several ways, annotates the paper output directly using a pen, attaches sticky notes, and creates one or more annotation documents. The annotated document and any other material is then sent to a supervisor who reviews the material, which is perhaps from several reviewers, and may consolidate the comments into one set. This set is then passed back to the creator to modify the document. Several revisions, or versions of the document may be produced during this process.
- **Users of documents**: Once the review cycle is complete, which possibly involved several versions of the document, the document is published. The final document is made available to those requiring View-only access to it. At this stage, the document may be provided for viewing either in its native format or as a print rendition.

VueLink provides the capability of marking up a document and storing Markup information as an annotation file in the vault. There are different types of markup entities offered in addition to hyperlinking capabilities.

Markup File Management

More than one Markup file can be attached to a document. In addition, users have the option of displaying one or more Markup files simultaneously.

If the currently displayed document has registered Markups, a red light bulb icon displays in the lower left corner of the status bar, alerting you to the existence of one or more Markup files.

Markup files automatically track the revisions of a document so that each revision has a distinct set of related Markup files. When Markups are valid for a subsequent revision they can be promoted to that particular revision.

Other Useful Features

Compare

You can use the Compare feature to visually compare documents of the same type (raster or vector). The two selected files display simultaneously in their own

windows with the comparison findings displayed in a third viewing window. This feature is useful for finding similarities and differences in revisions of a drawing.

Search

You can search for a document by name or by extension and the load the document of their choice. This feature helps you to find documents stored in the Filesys DMS repository quickly.

Conversion

Documents can be converted from any file format AutoVue supports to graphic formats such as TIFF.

Engineering Documents

Sample Integration is fully equipped to handle complex engineering documents that may consist of external references, layers, and blocks.

Cached Metafiles

With AutoVue, it is possible to enhance the viewing performance of large drawings by using cached metafiles. A **metafile** is a lightweight format developed by Cimmetry which represents a true replica of the original format.

Every time you view a file with AutoVue and close the applet window or view another file, AutoVue automatically generates a metafile and checks it into the Filesys DMS repository as a rendition to the original format (the location inside the Filesys DMS is set as specified in the PRD document).

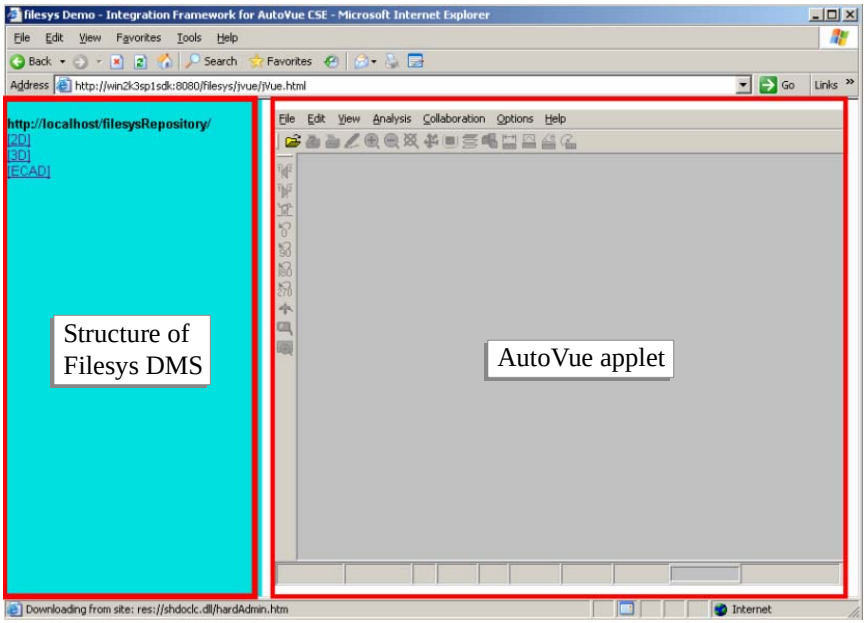
When viewing a file, AutoVue checks if a cached metafile rendition exists inside the Filesys DMS repository. If there is one, AutoVue checks it out instead of the native file.

Overriding Behavior

An advanced integration feature is overriding behavior of specific DMAPI messages without recompiling the code. This feature allowed integrators to upgrade their integrations transparently and makes the Sample Integration software open to extensions.

Viewing Documents

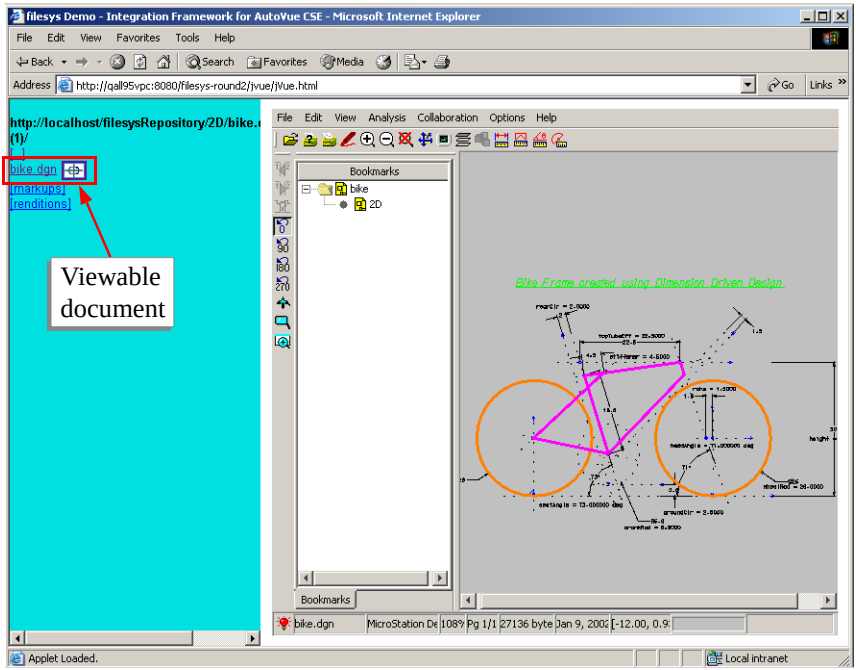
1 Run your Web browser, then go to the Top Level site home page.
For example: **http://<myserver>:8080/filesys/jvue/jVue.html**



As shown in the previous figure, this HTML page contains two frames:

- The frame on the left displays the structure of Filesys DMS repository. The user can dynamically navigate the Filesys DMS data by expanding folders and selecting documents to view.
- The frame on the right displays the AutoVue applet. When the user clicks a document in the frame on the left, the selected document is displayed in the AutoVue applet in the frame on the right.

2 To view a document, navigate the **Filesys DMS** repository and click the document you want to view. Viewable documents are tagged by the AutoVue icon  .



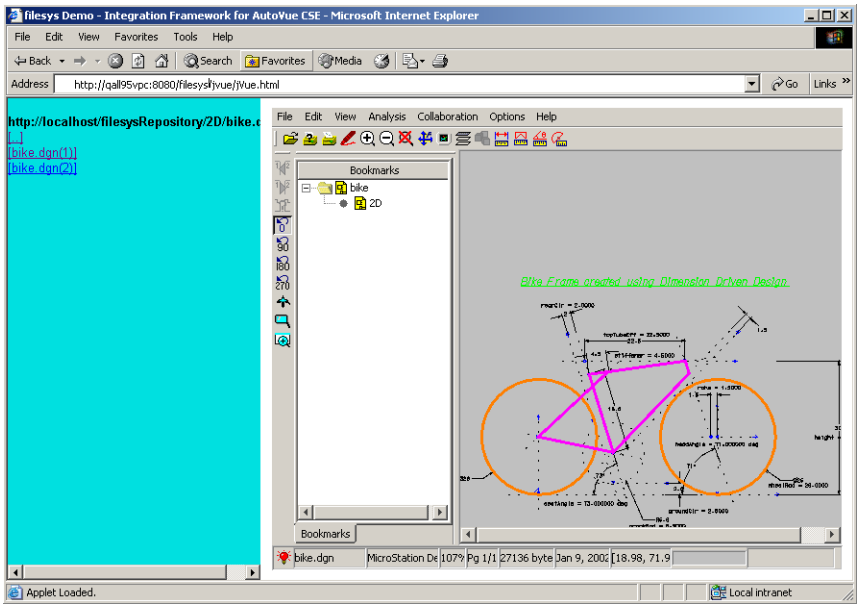
3 To view a specific version of a document:

a. Navigate the Filesys repository

b. Choose and expand the document folder.

c. Select the target version folder.

d. Click the base document.


filesys Demo - Integration Framework for AutoVue CSE - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites Media
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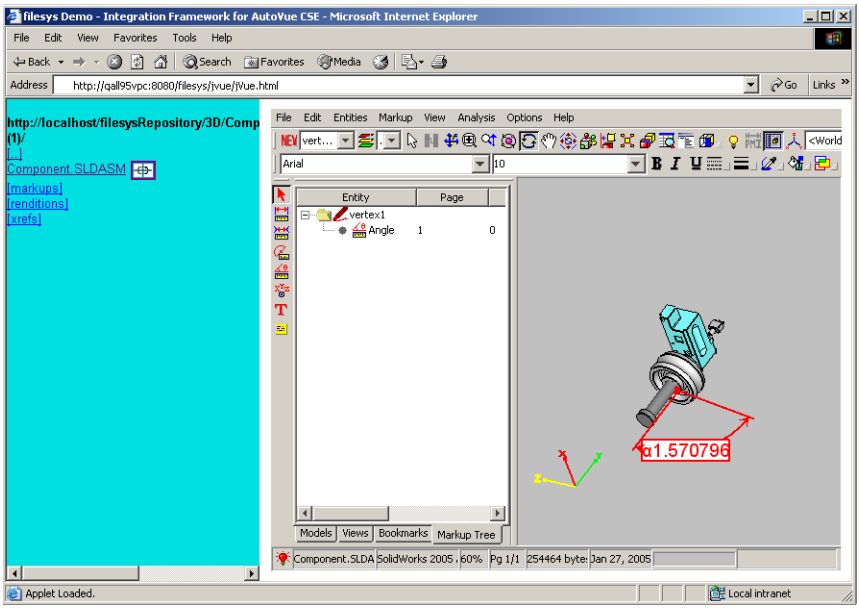
Applet Loaded.
Local intranet

Creating Markups

1 Display a document within AutoVue.

2 Enter Markup mode by by clicking the **Markup** button  in the toolbar or selecting **File > Markup** from the AutoVue main menu.

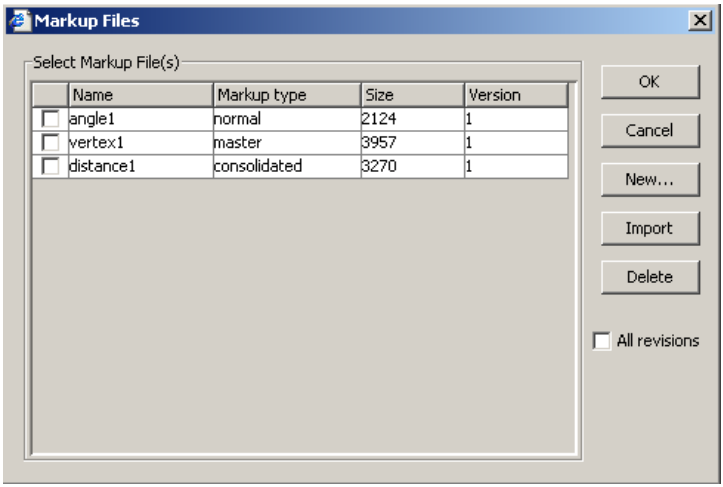
The current active document displays in Markup mode and is ready for you to create markups.



Note:

- If you have just finished creating a markup file, and you want to create a new markup file, click the **New** button  in the toolbar or select **File > New** from the AutoVue main menu.

- If there are existing markups, the **Open Markup** dialog appears. Click **New**.

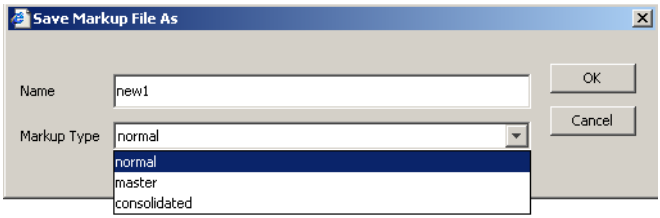


Saving Markups

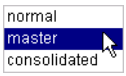
AutoVue tags markup files as normal, consolidated or master. Complete the following steps to save newly created markup files, existing markups, or to save new markup files as Master markups.

Saving a New Markup File

1 Select **File > Save** from the AutoVue main menu.
The **Save Markup File As** dialog box appears.



2 Enter a name for the Markup file.
3 Select the **Markup Type.** There are three types: **normal**, **master**, or **consolidated**.



4 Click **OK**.
The markup file is saved and remains displayed in the AutoVue viewing window.

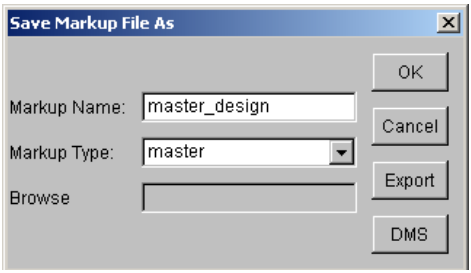
Save an Existing Markup File

1 Select **File > Save** from the AutoVue main menu.
The **Save Markup File As** dialog box appears.
The markup file is saved and remains displayed in the AutoVue viewing window.

Saving a Newly Created Markup File as a Master Markup

Master Markups are immediately displayed when their base document is displayed. When viewing a document, Master Markups are automatically loaded and displayed in Markup mode. Although non-owners can view Master Markups, they cannot modify the Master Markups or create their own Markups based on them.

1 After you have finished marking up a document, select **File > Save** or **File > Save As** from the menu bar.
The **Save Markup File As** dialog appears.



2 Complete the **Markup Name** field.
3 Select **master** for **Markup Type**.
4 Click **OK**.

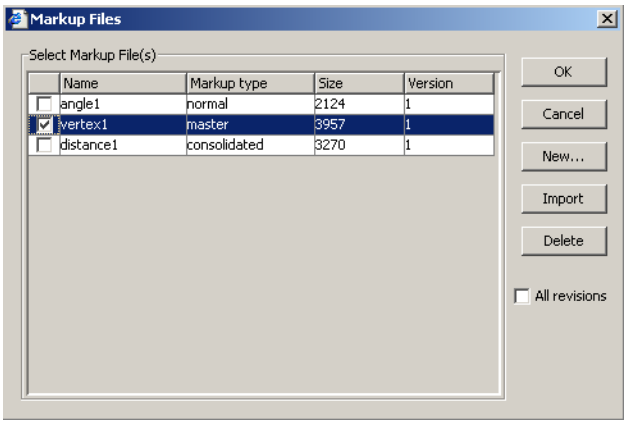
The Master Markup file is created and stored in the same library where the base document is located. Now when another user logs on and views this file, AutoVue Markup mode automatically launches, loads your Master Markups, and displays them.

Displaying Existing Markups

Aftr the selected file displays in AutoVue, take the following steps:

1 Enter Markup mode by clicking the **Markup** button  in the toolbar or by selecting **File > Markup** from the AutoVue main menu.

2 Select **File > Open** from the AutoVue main menu.
The **Open Markup** dialog box appears.



3 Select the markup file or files you want to view, then select the active markup.

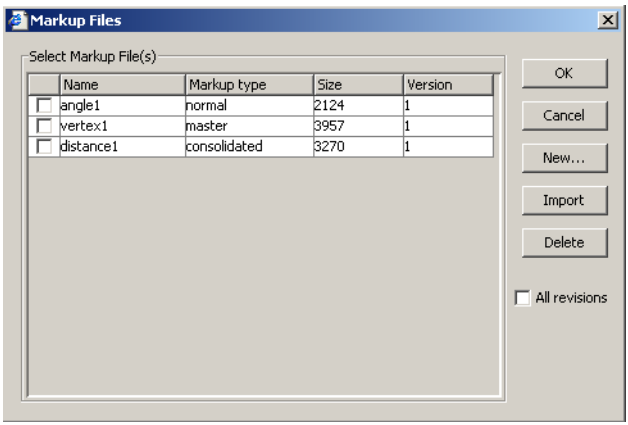
4 Click **OK**.

Promoting Markups

It is possible to promote markups from an earlier version of a document to the current version. When markups are promoted, they are saved against the new version of the document.

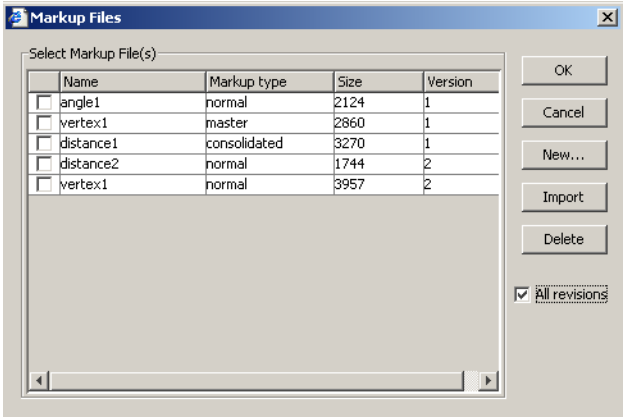
After displaying a file with AutoVue, take the following steps:

1 Enter Markup mode by clicking the **Markup** button  in the toolbar or by selecting **File > Markup** from the AutoVue main menu.
The **Open Markup** dialog box appears.



2 To display the markup files from previous versions of the base file, click the **All revisions** checkbox.

3 The previous markup files display for the previous versions of the base file, as shown in the following figure. (Note: Some columns were narrowed to show the **Version** column)



4 Select one markup file from the previous version, such as version 1 in the example.
The markup file displays with the current version of the base file.

5 When you save the selected markup (with or without modification), it is saved as the markup of the current version of the base file.

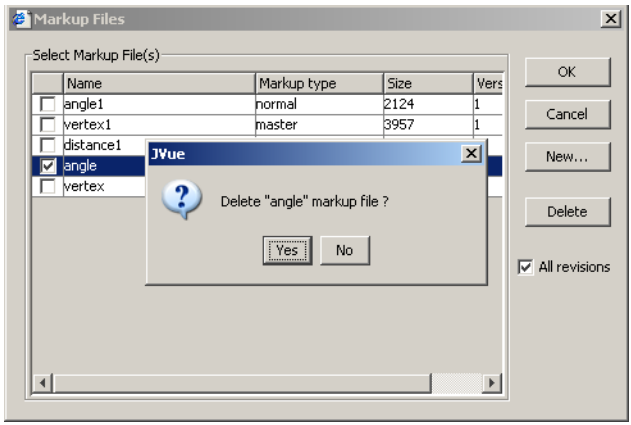
Deleting Markups

After displaying a file with AutoVue, take the following steps:

1 Enter Markup mode by clicking the **Markup** button  in the toolbar or by selecting **File > Markup** from the AutoVue main menu.
The **Markup Files** dialog box appears.

2 Select one or more markups from the list.

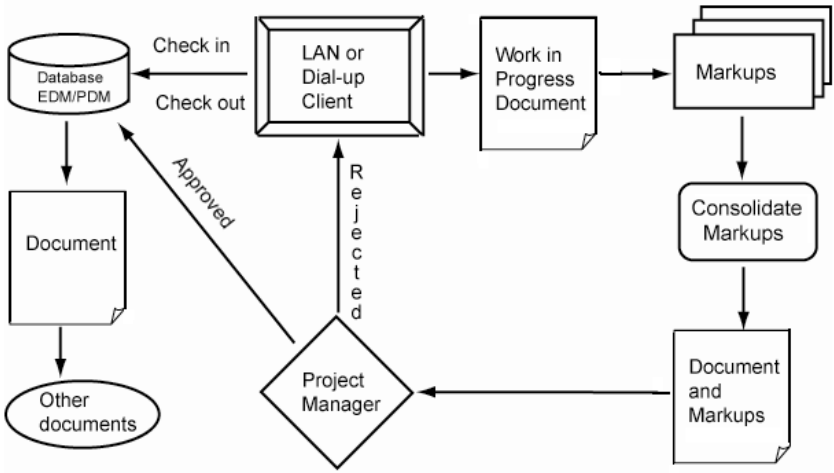
3 Click **Delete**.
A dialog appears, asking you to confirm the deletion.



4 Click **Yes**.
The selected markup file(s) are deleted from the list of markups in the **Markup Files** dialog box. The **Markup Files** dialog box displays the remaining markup files.

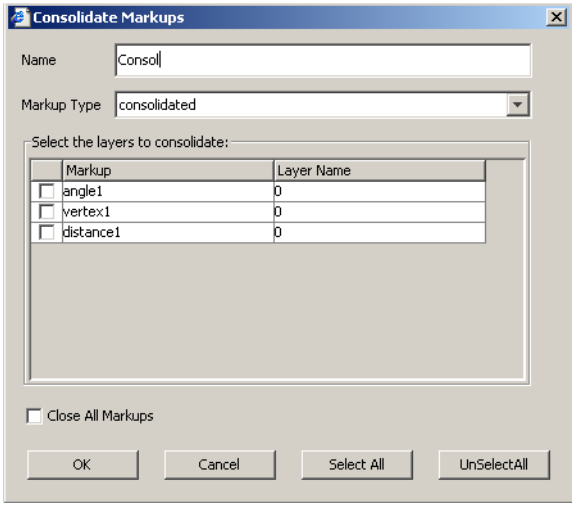
Consolidating Several Markups into a single Markup

The **Consolidate** option allows you to create a new markup file that combines copies of selected parts of different markup files. This option is available only if multiple files have been loaded using the multi-load option. During the review cycle, consolidation simplifies document revisions by providing the author with one consolidated markup file rather than several markup files.



1 Display the two or more Markup files to be consolidated.

2 Select **Consolidate** from the Plug-in **File** menu. The **Consolidated Markups** dialog appears.



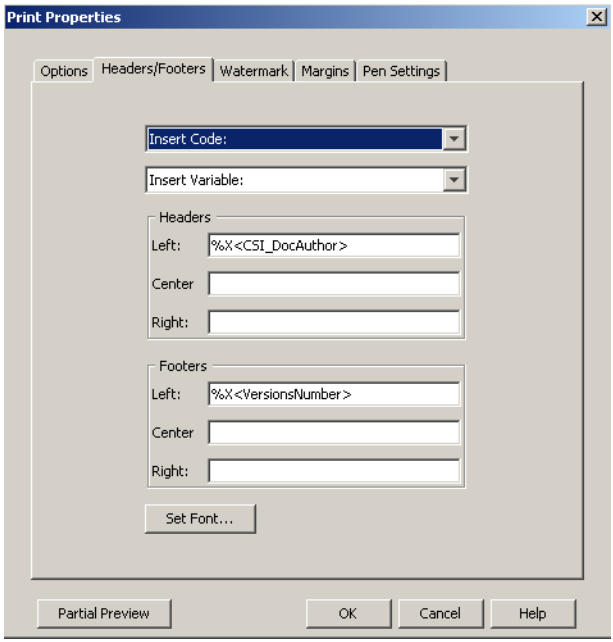
3 Enter a name for the consolidated Markup file.
4 Select one or more layers to be displayed in the consolidated Markup file.
5 For **Markup Type**, select **consolidated**, and click **OK**.

Printing Headers, Footers and Watermarks

With AutoVue, it is possible to print document attributes in headers, footers, or as watermarks.

1 Select **File > Print** from the AutoVue main menu.
The **Print Properties** window appears.

2 Customize the Print Properties. To define headers or footers, see the **Headers/Footers** section. To define watermarks, see the **Watermarks** section.

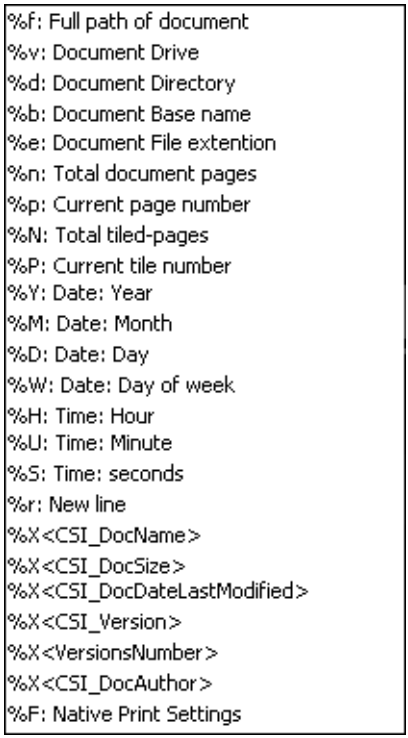


Headers/Footers

Take the following steps to define the headers and footers you want to included on every printed page of the document.

1 In the Print Properties window, select the **Headers/Footers** tab.

2 Enter text in the Header and Footer fields, and/or choose from the **Insert Code** drop-down list box to set the information for headers and footers. See the following figure for the complete list of codes.



3 Click **OK** when you are done.

Watermarks

A watermark prints faintly and transparently under the current document's contents. Take the following steps to define how a watermark appears on the printed document.

1 Select the **Watermarks** tab.
2 Enter the text in the **Watermark Text** field. The text displays as it will appear on the document when you print it.
3 Click the **Font** button to customize the font.
4 When you have finished, click **OK**.

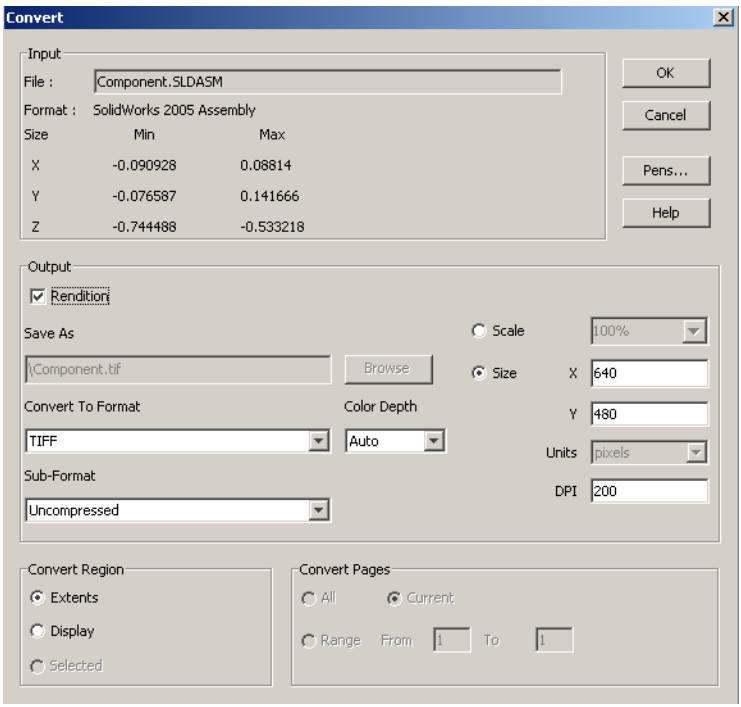
Conversion

With AutoVue, it is possible to convert documents to other formats such as TIFF, and to check in the converted document back into the Filesys DMS repository as a rendition to the original.

Note: Only the TIFF format is supported for saving as a rendition.

After displaying a file with AutoVue, take the following steps:

1 Select **File > Convert** from the AutoVue main menu.
The **Convert** dialog box appears.



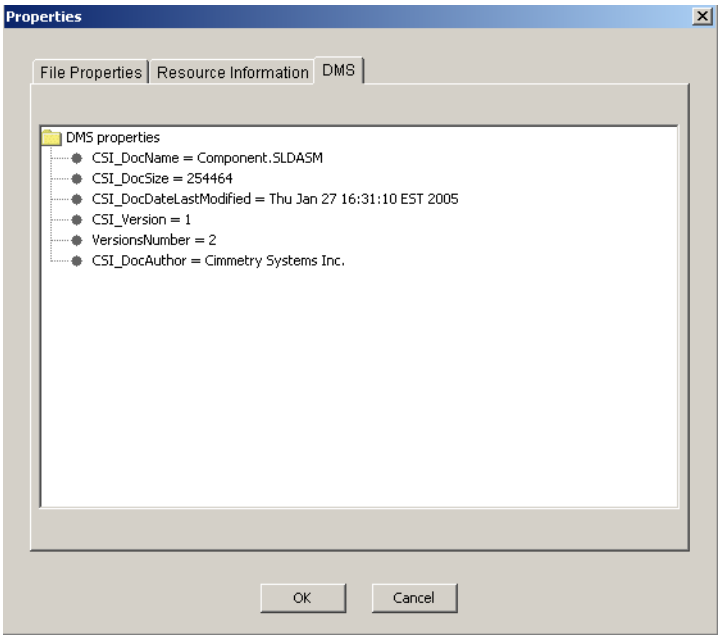
2 Select TIFF from the **Convert To Format** menu.
3 Check the **Rendition** checkbox.
4 Click **Ok**.

DMS Properties

Use AutoVue to display the document properties saved in the DMS.

After displaying a file with AutoVue, take the following steps:

1 Select **File > Properties** from the AutoVue main menu.
The **Properties** dialog box appears.



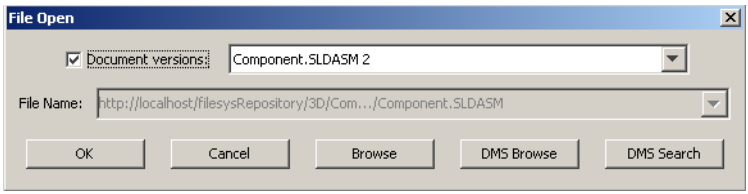
2 Click the **DMS** tab.
Document properties display. These can include property name, size, date of last modification, version number, number of versions of this document, and author.

File Compare

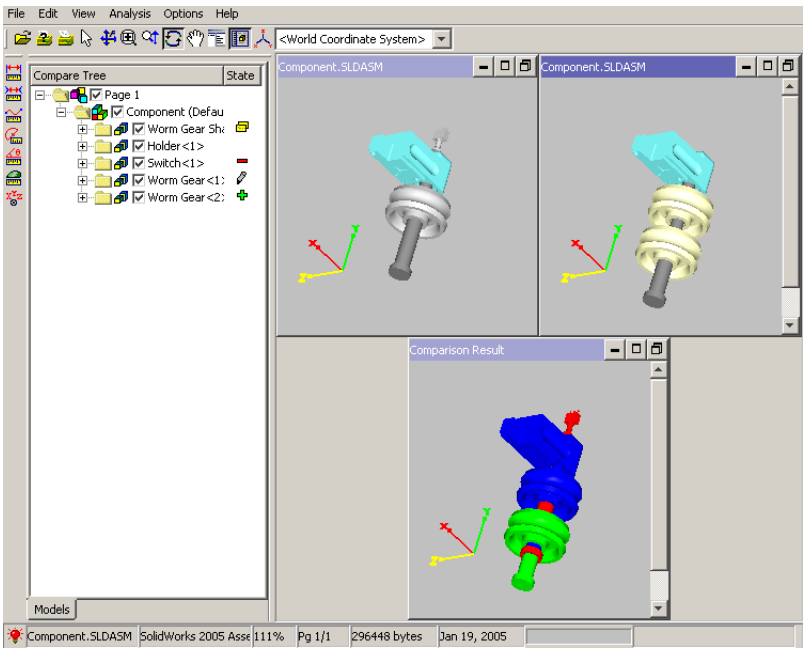
With AutoVue, it is possible to compare the current version of a document with any of its past versions.

After displaying a file with AutoVue, take the following steps:

1 Select **Analysis > Compare** from the AutoVue main menu.
The **File Open** dialog box appears.



2 Select a version from **Document Versions** drop down list.
AutoVue displays three windows. The first window contains the original document, the second contains the version to compare against, and the third the comparison result window. Additions are green, deletions are red, and unchanged elements are blue.

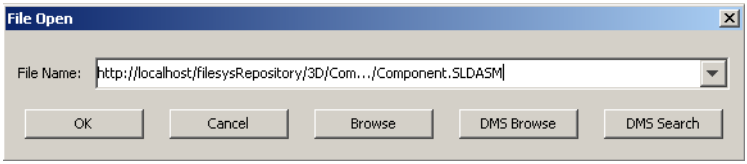


File Browse

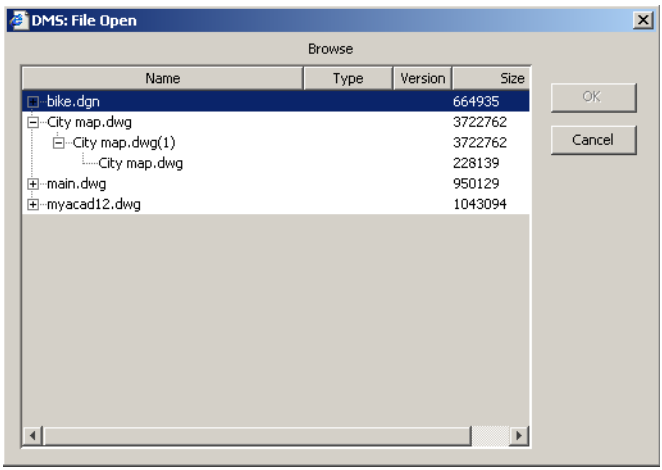
You can use AutoVue to browse through the Filesys DMS repository to select files for viewing or comparison.

After displaying a file with AutoVue, take the following steps:

1 Select **File > Open URL** from the AutoVue main menu.
The **File Open** dialog box appears.



2 Click the **DMS Browse** button.
A browse window appears which displays the top folder of the Filesys DMS repository. You can recursively expand the top folder and its subfolders until you reach the target document.

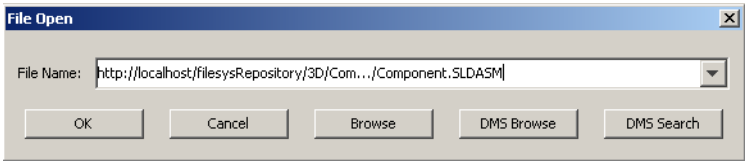


File Search

With AutoVue, it is possible to search the Filesys DMS repository for selecting a document for the view or compare operations.

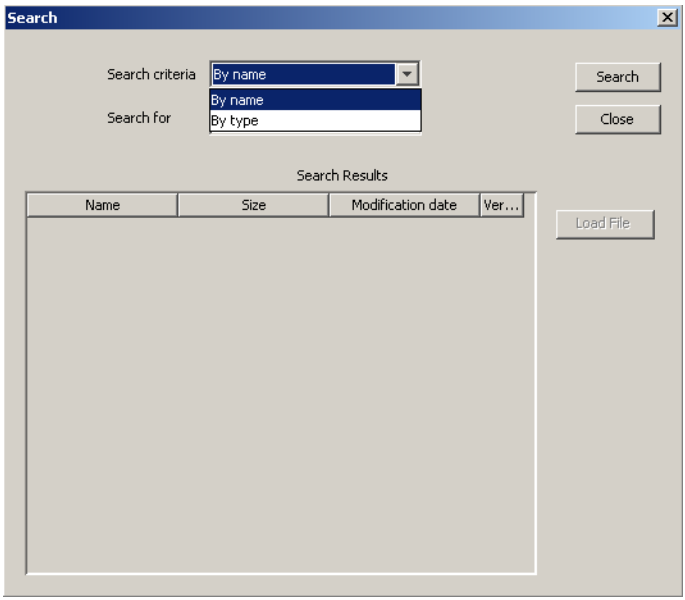
After displaying a file with AutoVue, take the following steps:

1 Select **File > Open URL** from the AutoVue main menu.
The **File Open** dialog box appears.



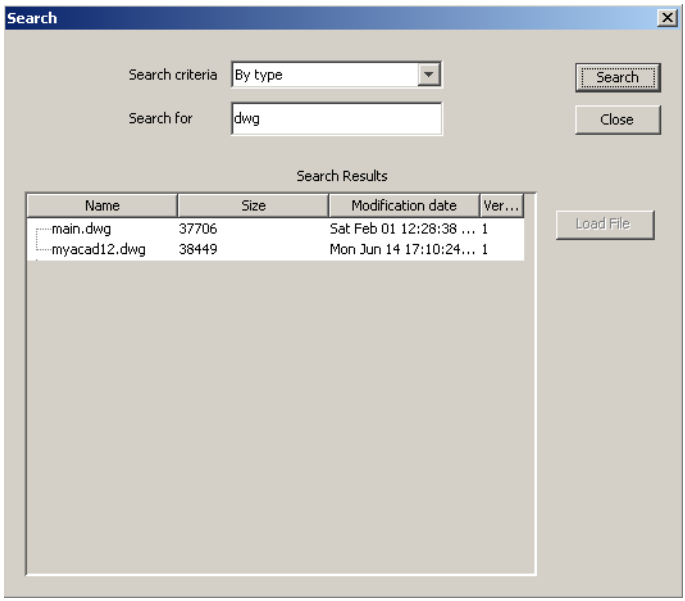
2 Click **DMS Search**.

3 In the **Search** window that appears, select **By name** or **By Type** from the **Search criteria** menu.



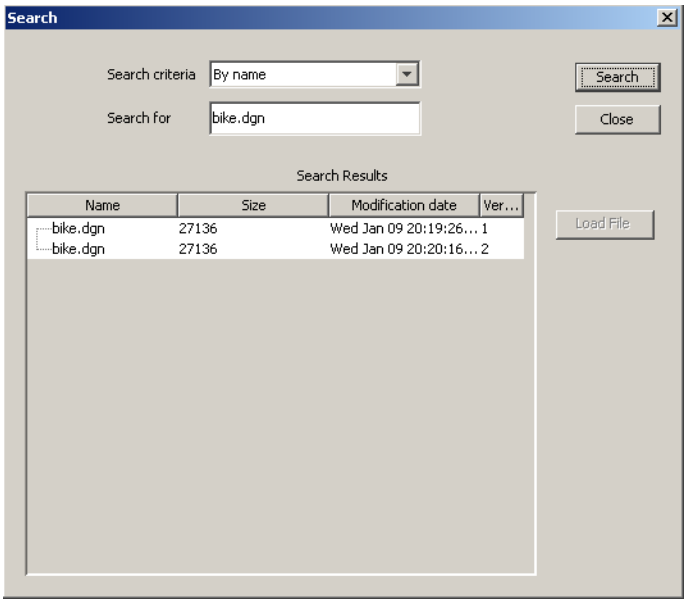
4 If you selected **By name** in the Search criteria field, enter the file name in the **Search for** field.
If you selected **By type** in the Search criteria field, enter the **extension** of the document you want to find.

Note: When you search a document **By type**, you can choose whether or not to specify the dot character when entering the file extension in the **Search for** field.



5 Click **Search**.

The search results display.



6 Select a document from the **Search Results** list and click **Load File**.

Add New Data to the Document Repository

The Filesys DMS application lets you add new data to the document repository from the Eclipse WTP IDE or from a console. To add the new data to your document repository you must execute the **main()** method of **com.cimmetry.vuelink.filesys.dms.util.FilesysDataStructureCreator** class.

Add Data from Eclipse IDE

You must set the values of the arguments parameter of the **main** method.

1 Locate the following block:

```
public static void main(String[]  args) {
        BasicConfigurator.configure();
        //String[] params = null;
        //String[] params = {"-url", "c://filesysRepository//filesysRepository//ECAD",
        "-b", "C://av19.1//samples//ECAD//Allegro.brd"};
        FilesysDataStructureInfos data = new FilesysDataStructureInfos();
        try{
            data.constructStructure(args);
            FilesysDataStructureCreator struct = new
FilesysDataStructureCreator(data);
            struct.createStructure();
        }catch(FileNotFoundException fex){
            m_logger.error(fex);
            System.exit(0);
        }
        catch(Exception ex){
        m_logger.error(ex);
            System.exit(0);
        }
    }
}
```

2 Uncomment the line **//String[] params = {"-url", "c:// filesysRepository//filesysRepository//ECAD",**.

3 In the line **data.constructStructure(args);**, replace **(args)** with **(params)**.

Note: Once you have made these changes, adding files from the console (see **Add Data from a Console**) will not work. To add files through the console, keep the default code.

These arguments indicate types, versions and locations of the files to add in the repository. You can add several types of documents to the repository such as: base documents, xrefs, markups and conversions files. We use option **<-option>** to indicate the document type. Here is the complete list the options:

-url: location of DMS repository
-b: base file
-v: version number
-x: xrefs files
-m: master markups files
-n: normal markups files
-c: consolidated markups files
-tiff: TIFF conversion file
-pdf: PDF conversion file
-meta: metaFile.

For instance, in the previous figure, the **URL** of the repository is:

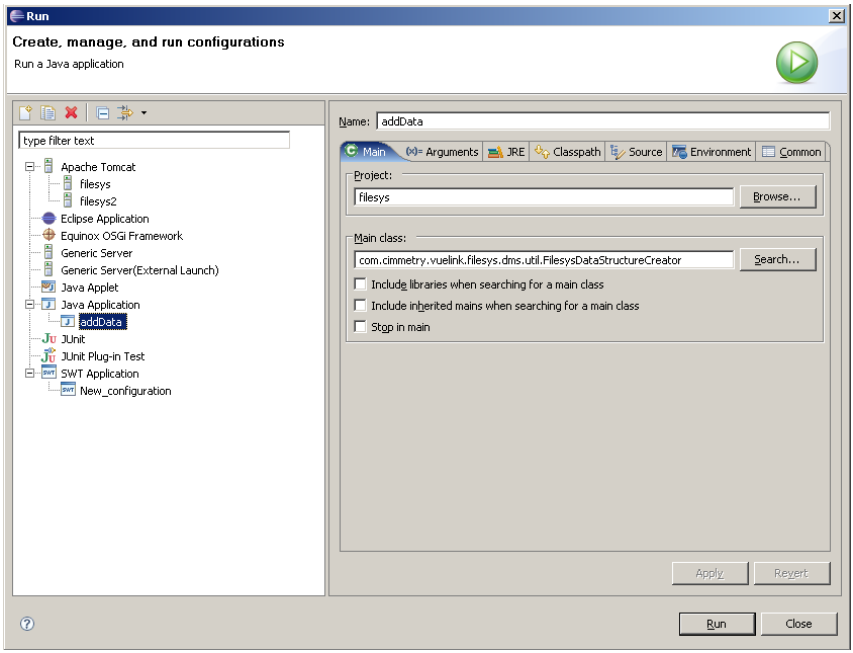
c:\filesysData\filesysRepository\2D

The base file is **myacad12.dwg** and is located in the **C:\downloads** folder. The document version number is optional. When it is not indicated, the system sets it to version 1. For the version other than 1, you must specify the version number, such as -v 2, -v 3, and so on.

To run the **FilesysDataStructureCreator** class, complete the following steps:

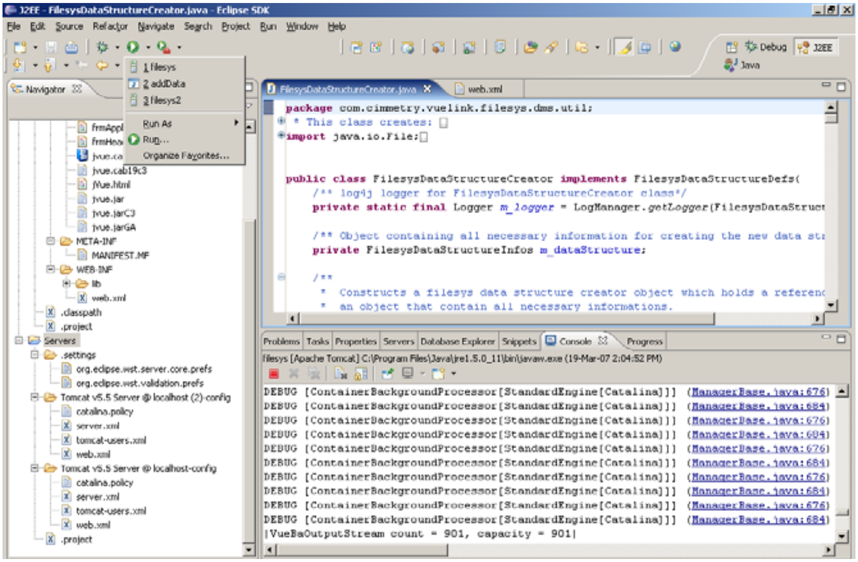
1 Open your Eclipse WTP IDE.
2 Select the **filesys** project.
3 From the **RUN** menu, click **Run**.
4 Select **Java Application**.
5 Right-click and select **New** from the contextual menu.
6 Enter **addData** in the **Name** field.
7 Search the class to execute. The class must have the **public static main** method (See the following figure):

com.cimmetry.vuelink.filesys.dms.util.FilesysDataStructureCreator

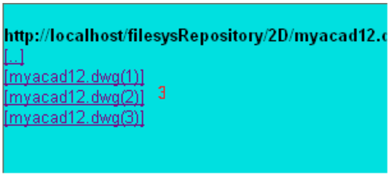


8 Click **Apply**, then click **Close**.

9 From the **RUN** menu , click **addData**.



10 Once you have added the new files to the filesys repository, refresh your browser. The newly-added files display in the listed, as shown in the following figure.



Before

After

Add Data from a Console

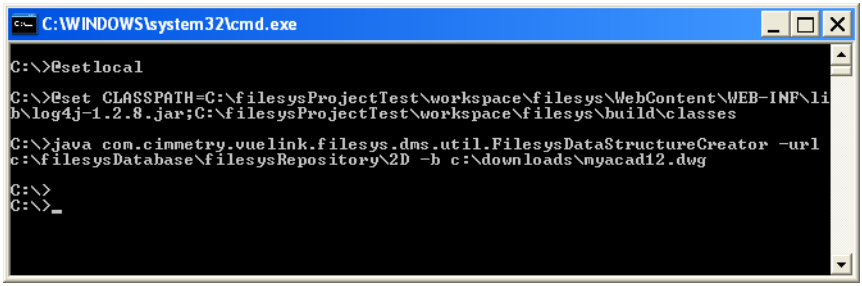
To be able to add data to the repository from a console, complete the following steps:

1 Set the **CLASSPATH** with the classes folder <Installation directory>\workspace\filesys\build\classes.

2 Set the **CLASSPATH** with the log4j-1.4.2.jar file <Installation directory>\workspace\filesys\WebContent\WEB-INF\lib**log4j-1.4.2.jar**.

3 Run the following class:
com.cimmetry.vuelink.filesys.dms.util.FilesysDataStructureCreator

See the following figure for an example.



How to Set CLASSPATH Variable

You can set CLASSPATH on Unix or Windows.

- To set CLASSPATH on **Windows** use the following command:
  set CLASSPATH=path1;path2
  For example:
  set CLASSPATH=<Installation directory>\workspace\filesys\build\classes
- To set CLASSPATH on **Unix**, use the following command:
  export CLASSPATH=path1:path2
  For example:
  export CLASSPATH=<Installation directory>/workspace/filesys/build/classes

Feedback

Cimmetry Systems products are designed according to your needs. We would appreciate your feedback, comments or suggestions. Contact us by fax, e-mail or telephone. There is a feedback button on our Web page that activates an easy-to-use feedback form. Let us know what you think.

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