

## CadTop

### CadTop – supporting controlled change of AutoCAD and MicroStation drawings in EMC Documentum's Desktop and Webtop

#### SWORD'S CADTOP PROVIDES ENGINEERING DOCUMENT CONTROL

CAD users can now have the best of both worlds through the integration of AutoCAD / MicroStation with EMC Documentum's ECM (Enterprise Content Management) functionality. Drafting Personnel, Designers and Engineers can focus on important CAD tasks within a familiar AutoCAD / MicroStation interface while having access to the full power of EMC Documentum's Drawing Management capabilities.

CadTop goes beyond drawing storage and retrieval, providing a range of CAD drawing management features to enhance the productivity of your personnel.

#### GENERAL FEATURES

**Login:** Standard EMC Documentum Login/Logout facilities are presented to the user. Auto Login will allow the user to configure login details to a default Docbase.

**Cache Management:** Local caches are managed by CadTop

**Help:** On-line help is provided to assist the user with the EMC Documentum commands that have been added to AutoCAD / MicroStation.

#### SEARCHING

AutoCAD / MicroStation users are able to quickly find documents in a Docbase using the standard EMC Documentum Find function. This provides the following features:

**Find Drawings:** Users are able to find drawings in a Docbase by searching on properties or by searching on the content of CAD drawings using Full Text Search. Search results may be saved for later re-use.

**Browsing and Document Viewing:** Search results are presented to the user and drawings can be opened in AutoCAD / MicroStation by simply selecting the document. The built-in document viewing tool enables users to quickly and securely preview images stored within the Docbase. The document-viewing tool can display many different image file formats.

#### DRAWING CAPTURE

A range of file capture features are described below:

**Adding Drawings to a Docbase:** If authorised, the user can add the currently selected drawing in AutoCAD / MicroStation to a folder within a Docbase. The user can add a document without any content.

#### Key Features:

##### INTEGRATION

Access EMC Documentum commands directly from within your AutoCAD / MicroStation working environment.

##### TITLE BLOCK INTEGRATION

Information from AutoCAD / MicroStation drawing title blocks can be directly validated and mapped to and from document properties within EMC Documentum.

##### X-REF'S

AutoCAD / MicroStation drawing X-Ref's can be managed within the EMC Documentum Docbase to ensure ongoing integrity.

##### BATCH PROCESSING

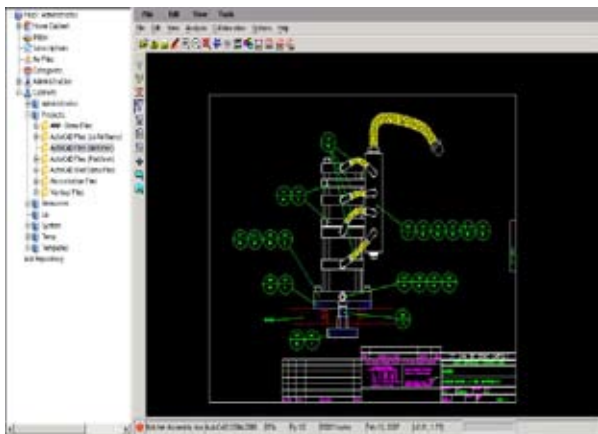
CadTop provides batch processing features such as Bulk Import which allow users to add new drawings to EMC Documentum.

##### DRAWING CHANGE MANAGEMENT

Full integration with EMC Documentum Check Out/Check In functions and document lifecycles ensure changes are tightly controlled and audited.

##### DOCUMENT VIEWING

Powerful features to display and manipulate hundreds of document image formats directly from within AutoCAD / MicroStation. CadTop supports rendering of CAD drawings to publication formats such as PDF and JPG.



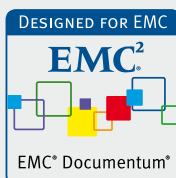
Browse Documentum from within CAD Environment



## CadTop

### Strengths:

- Fully integrated with AutoCAD / Microstation
- ECM functionality within familiar AutoCAD/ MicroStation interface
- Access to enterprise-wide content
- Intelligent drawing attribute & reference file management
- Enhanced document control from within AutoCAD / MicroStation
- Secured access to entire Docbase
- Image file Preview



**Batch Processing:** To allow for quick import of drawings, CadTop allows a user to bulk select drawings for import. Title block content can automatically be extracted to populate the document properties with the ability to have different mappings for each document type.

### DRAWING LIFECYCLE

CadTop provides a range of features to support the controlled change of AutoCAD / MicroStation drawings:

**Check Out / Check In:** CadTop allows a user to checkout a drawing prior to change to ensure that it cannot be changed by anyone else. Anyone trying to access a checked out drawing will be informed automatically that drawing is involved in a change process. Users can view the checked out revision of the drawing but cannot access the working copy.

Once changes to the drawing have been completed, the drawing is checked-in. This will automatically increment the drawing's revision and preserve the previous revision. Any user then searching for the drawing will automatically retrieve the latest revision.

**Update Properties:** The properties of a drawing stored in the Docbase can be modified.

**Delete:** The active drawing in AutoCAD / MicroStation can be deleted from its associated Docbase.

### AUTOCAD X-REF'S & MICROSTATION REFERENCES

CadTop provides a range of commands to support the management of X-Ref's (Drawing & Images) within a drawing:

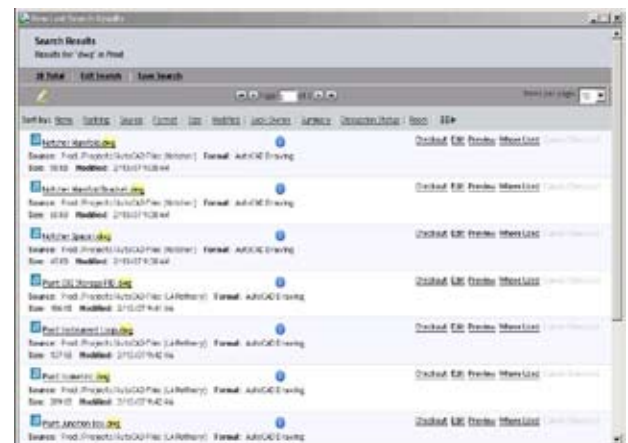
**Management:** The user is able to control the behavior of X-Ref's by amending the properties of each X-Ref. The properties of an X-Ref include: the retrieval location, whether an over-write occurs if there is an existing drawing with the same name, and if the reference is static or dynamic.

**Create/Attach:** Allows the user to create a new X-Ref for a drawing stored in a Docbase. The attach command allows an existing X-Ref in the drawing to be selected and referenced in the Docbase.

**Details/Modify:** The properties of a drawing that have been referenced can be displayed. The user can modify the properties of an X-Ref.

**Detach:** The user is able to detach a reference between two drawings.

**Reload:** Upon selection of an X-Ref, a user can reload the corresponding drawing from the Docbase.



Search Results from within CAD Environment

## CadTop

### Customers include:

- ABB
- AMEC Paragon
- Ameren Services
- Ameresco Canada
- BA Energy
- BAPCO
- BART
- BP
- Britannia Operators Ltd
- British Energy
- Centrica Energy
- ChevronTexaco
- Chicago Transport Authority
- China Light and Power
- Cleco
- Duke Energy
- East Bay Municipal Utility District
- EC Harris
- Emcor Group
- Energy Australia
- Entergy
- Environmental Chemical Corp
- Fluor
- FMC Technologies
- Georgia Gulf
- Goodrich
- Hydrogen Energy
- Infrastructure Ontario
- London Underground
- Luminant
- Marathon
- Murphy Oil
- Mustang Engineering
- NNE
- NRG Energy
- Odebrecht
- Parsons Bickerhoff
- Pasadena Refining
- Petrobras
- PetroChina
- PSE&G
- Qatar Gas
- QGPC
- QWEST
- Rio Tinto Copper Mining
- Salt River Project
- Santos
- Schlumberger
- Schneider Electric
- Sellafield Sites (formerly British Nuclear)
- Semptra Energy
- Shaw Group
- Shell
- Shenhua Ningxia Coal Group
- Southern Union
- Strabag
- Talisman
- Transpower
- Universal Ensco
- UNOCAL
- Zachry Construction

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**Latest Revision:** To ensure that a drawing is referencing the latest revision of another drawing the user is able to replace a drawing with its latest revision.

### RENDITIONING, BINDING & MERGING

Users can choose whether renditions of a drawing are to be created when a drawing is checked in. This will create an EMC Documentum rendition of the main drawing, including any cross-references and images. Users can choose whether renditions in any or all of the following formats are created: GIF, JPG, PNG, BMP or TIFF. Additionally, the CadTop suite includes a plug-in to EMC Documentum's rendition server that allows for the automatic creation of renditions in the above formats and also in PDF format.

CadTop's "Bind" function allows users to create a single CAD file from a parent drawing with one or more cross-references or images. The resulting file is also stored as a Documentum rendition.

### AUTOCAD / MICROSTATION TITLE BLOCK ATTRIBUTES

CadTop supports the import, export and validation of drawing title block information on demand, and/or when drawings are retrieved and stored into a Docbase:

**Templates:** Users can configure the mapping of fields within a title block to the drawing properties. To allow support of multiple title block formats, multiple mapping templates can be created.

**Validate:** A drawing's properties can be synchronized and validated with the corresponding title block. The validation will report any discrepancies in document properties.

**Export:** Upon capture or revision change of a drawing into a Docbase, CadTop can automatically extract fields / tags from the drawings title block and fill in drawing properties.

**Import:** Document properties stored within the Docbase can update field / tag values within the drawing title block.

## REQUIREMENTS

### Technical Environment

#### Servers:

Windows 2000 SP4 or higher  
Windows 2003 SP1 or higher  
Windows 2005

#### Client:

EMC Documentum Webtop:  
AutoCAD 2004-2006 - 2008  
MicroStation V8, XM  
Windows XP SP2  
Windows Vista

#### Pre-Requisites

EMC Documentum 5.2.5 SP3  
EMC Documentum 5.3 SP2  
EMC Documentum 6 SP1

#### Documentation

CadTop Users Guide  
CadTop Administrators Guide

