architects design partnership LLP

BCUKI, London UK

Introducing XM to the Office

22 November 2007

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95 Staff

MicroStation user since 1992

CAD and IT management since 1996

Bentley Communty UKI committee member since 1997

webmaster www.bentleyuser.org

Why MicroStation XM?

or how to explain to the boss why you are spending your time and his money on Micro-Station V8 XM

- **stability**

- **speed**

- **potential for efficiency**

- **foundation for getting smarter with your data**

or how to explain to your users why they need to learn new tricks

- **easy transition**

- **same file format**

- **GUI improvements**

- **improved tools**

- **new features**

Hardcore

If MicroStation is the foundation we need some hardcore to support it
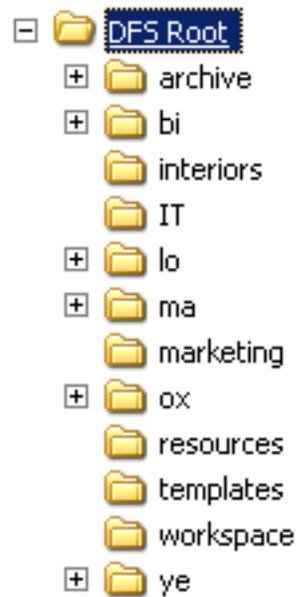
Get the best out of Windows

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Get the best out of Windows

- use DFS (Distributed File System) structure and replication, upgrade to Windows 2003 R2 for DFS-R delta replication.

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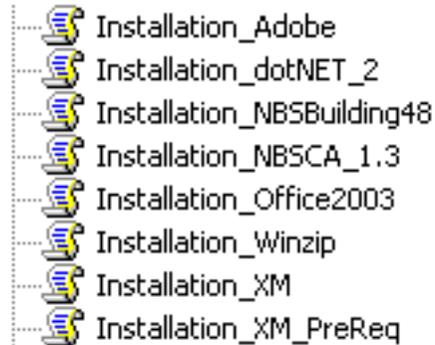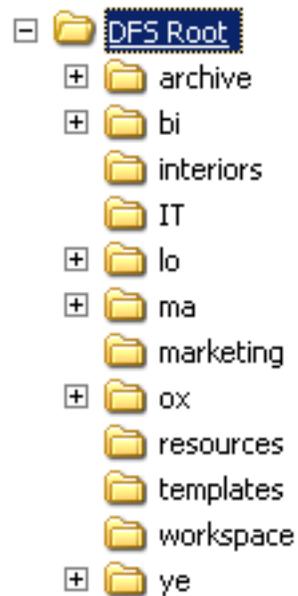- use DFS (Distributed File System) structure and replication, upgrade to Windows 2003 R2 for DFS-R delta replication.
- GPOs (Group Policy Objects) for installations and control of settings.

```
☐ 📁 DFS Root
    ⊞ 📁 archive
    ⊞ 📁 bi
       📁 interiors
       📁 IT
    ⊞ 📁 lo
    ⊞ 📁 ma
       📁 marketing
    ⊞ 📁 ox
       📁 resources
       📁 templates
       📁 workspace
    ⊞ 📁 ye
```

```
📜 Installation_Adobe
📜 Installation_dotNET_2
📜 Installation_NBSBuilding48
📜 Installation_NBSCA_1.3
📜 Installation_Office2003
📜 Installation_Winzip
📜 Installation_XM
📜 Installation_XM_PreReq
```

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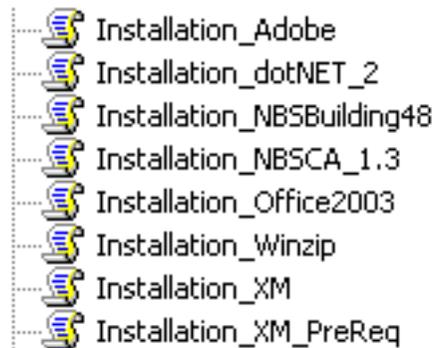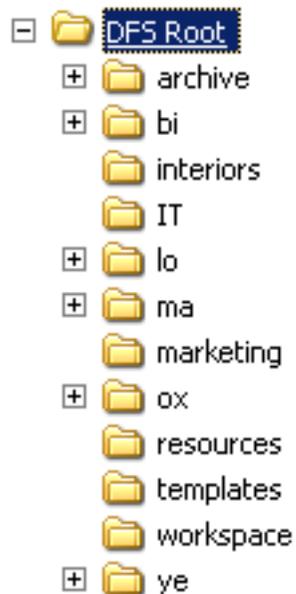- GPOs (Group Policy Objects) for installations and control of settings.
- login scripts to automate user folder and file creation

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├── Installation_XM
└── Installation_XM_PreReq
```

IF NOT EXIST "%userprofile%\XM" mkdir "%userprofile%\XM"
IF NOT EXIST "%userprofile%\XM\prefs" mkdir "%userprofile%\XM\prefs"
IF NOT EXIST "%userprofile%\XM\prefs\dwgdata" mkdir "%userprofile%\XM\prefs\dwgdata"

IF NOT EXIST "\\DFS Root\workspace\Users\%username%.ucf" COPY
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Installation

MSI Installers

- For foundation products now: MicroStation; Redline; View;

- For verticals soon (Q1 08 maybe?): Triforma; Bentley Architecture; Bentley Structural; etc

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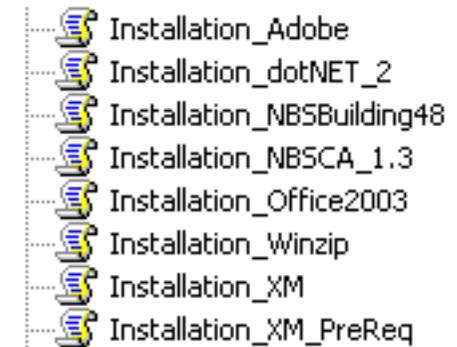
Pre-requisites

- Don't even try to install MicroStation (or Select Server) until these are in place.

Installation_Adobe
Installation_dotNET_2
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Installation_Office2003
Installation_Winzip
Installation_XM
Installation_XM_PreReq

Tips:

- DirectX 9 needs to be up to date, use a login script to test for the correct version and install if needed

- Set the registry to tell the Installer that the pre-reqisites are there.

```
IF EXIST "C:\WINDOWS\system32\d3dx9_27.dll" GOTO :End
IF NOT EXIST "C:\WINDOWS\system32\d3dx9_27.dll" GOTO :DX9install

:DX9install
net use x: /delete
net use x: \\DFS_Root\it\windows\DX9_Feb07
x:
DXSETUP.exe /silent

:End
```
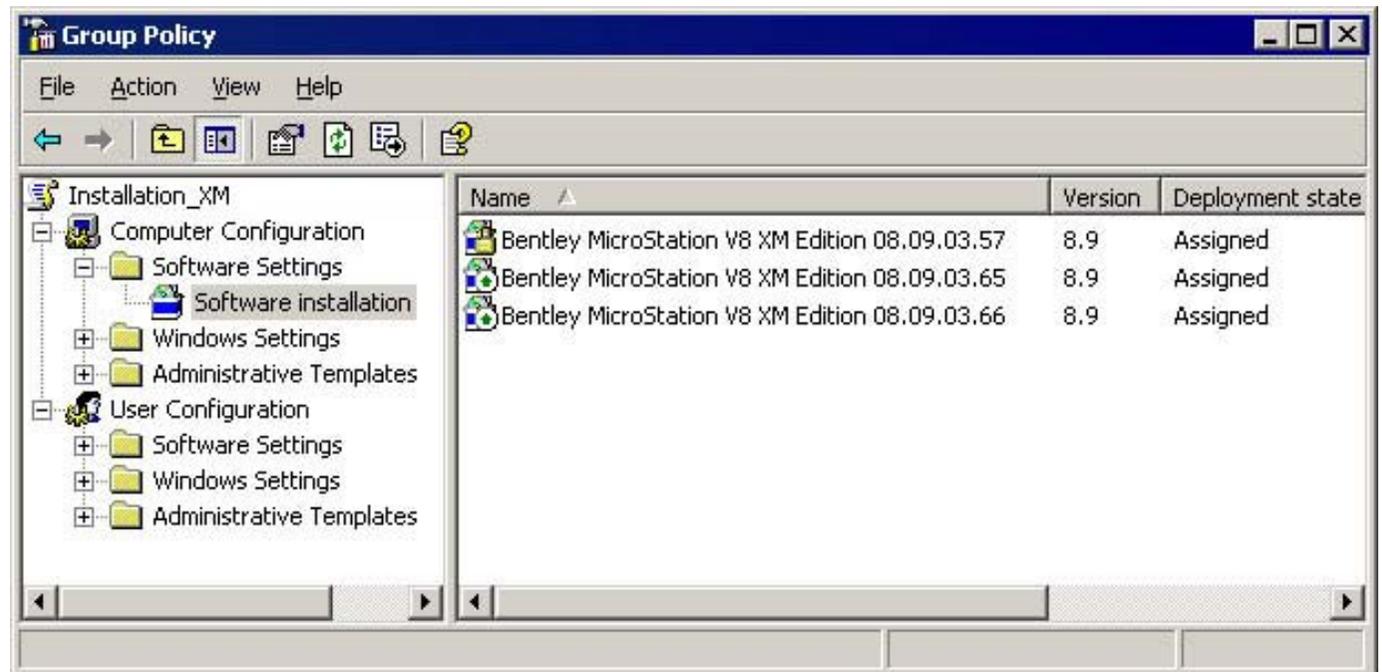
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Install using:

- GPOs
- Login scripts
- Microsoft SMS, MOM or other tools.

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Configuration

- Don't get tangled up in customising the MSI files or creating Transforms
- Modify the mslocal.cfg at the install point
- Configure within MicroStation as usual

Installing 08.09.04.xx

Registry Key and Values

The Pre-requisite installer adds the following Key:

- HKLM_Software\Bentley\XM_Prerequisite\080904xx

- Containing the Value named: InstalledVersion; Value data: 08090444
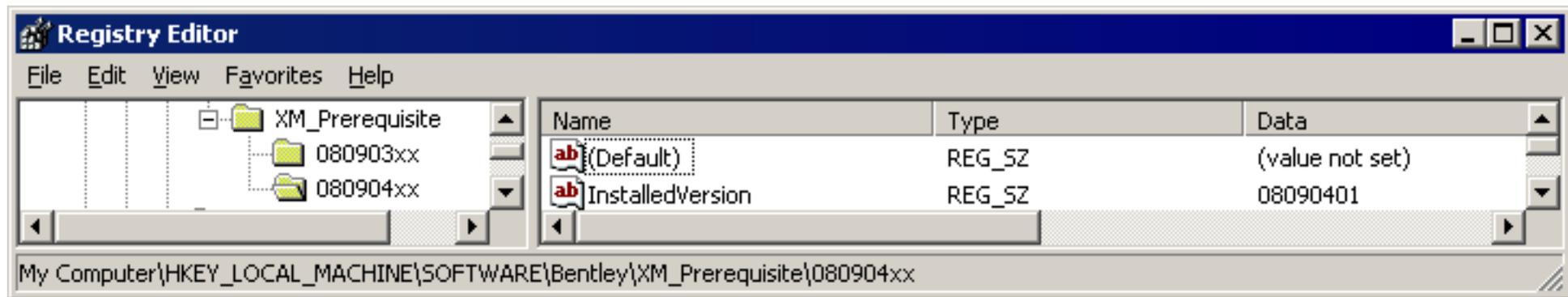
Microsoft Group Policies

GPO Admistrative Template

Download from http://www.bentleyuser2006/FeatureDetail.asp?ContentID=156

Creating the Administrative Install Point

Stage 1

Run the downloaded .exe file and unpack the.msi to a chosen location I've used a local drive:

- E:\downloads\XM\ms08090277en

Stage 2

Run msiexec with admin switch, e.g.

- msiexec /a "E:\downloads\XM\ms08090277en\MicroStation.msi"

This will then unpack the application files into a folder structure and create a cut down .msi file.

- During the installation select \\<NETWORKSHARE>\Bentley\XMinstallPoint\ as the destination.

Stage 3

- Go into the unpacked files(in the same folder structure as they would be on your c: drive.
- Edit the mslocal.cfg to add in your network configuration settings.

Stage 4

Update your GPO, simply update your install point with the new version and add it as a New Package to the installation GPO

Automate User Creation

Creating MicroStation's Preferences folders

By default MicroStation V8 XM creates folders like this:

C:\Documents and Settings\All Users\Application Data\Bentley\MicroStation\8.9\gImF1Xd17XI2jI7WfKEQ4g

Use Windows Roaming Profiles and take control with a script like this:

IF NOT EXIST "%userprofile%\XM" mkdir "%userprofile%\XM"
IF NOT EXIST "%userprofile%\XM\prefs" mkdir "%userprofile%\XM\prefs"
IF NOT EXIST "%userprofile%\XM\prefs\dwgdata" mkdir "%userprofile%\XM\prefs\dwgdata"

Note:

These lines can be added to a login script or batch file run by GPOs.
They create the folders that MicroStation will use when your mslocal.cfg includes the following:

_USTN_HOMEROOT =$(USERPROFILE)/XM/

This solution applies to all versions.

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Creating the User Preference File

In your standards.cfg file set MS_USERPREFSEED = <filename>.spf,

Using a clean untitled.upf, set your preferences the way you want them, then copy the resulting file to your .spf. Every new user will use this as a seed file for their preferences.

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One additional line in the login script:

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Set the Username

In mslocal.cfg set _USTN_USERNAME = $(USERNAME)

Preferences

New files in the Preferences folders

In C:\Documents and Settings\marct\XM are msspell.dic; selectby.rsc; shortcut.txt;

- So users can have their own Accudraw shortcuts

In C:\Documents and Settings\marct\XM\prefs are <username>.docking.xml.

- This separates toolbar and dialog docking settings from the rest of the preferences

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What Preferences should you set?

There are quite a few new ones

Preferences

Input

Preferences [untitled]

Category
- Database
- Input
- Look and Feel
- Mouse Wheel
- Operation
- Position Mapping
- Raster Manager
- Reference
- Spelling
- Tags
- Task Navigation
- Text
- View Options

Name for preferences: Default Preferences

Set Input Preferences.

☑ Start in Parse All Mode
☐ Disable Drag Operations
☐ Allow ESC key to stop current command

Locate Tolerance: 10
Locate Interiors: Rendered or Filled
Pointer Size: Normal
Pointer Type: Orthogonal
Click Sensitivity: Normal

Reset Pop-up Menu: Press and Hold
Hold Delay: Short 10 Long

OK

Cancel

Defaults

Focus Item Description

For more options, click on the category list at left.

Preferences

Look and Feel

Preferences [untitled]

Category	Set Look and Feel Preferences.
Database	Name for preferences: Default Preferences
Input	
Look and Feel	Single Click: Locked
Mouse Wheel	Default Tool: Selection
Operation	Highlight: Gray
Position Mapping	Layout: Regular
Raster Manager	Tool Size: Medium (24 x 24)
Reference	View Tool Size: Small (16 x 16)
Spelling	Dialog Font: Microsoft Sans Serif, 9 Font...
Tags	
Task Navigation	☐ Auto-Focus Tool Settings Window
Text	☑ Borderless Icons
View Options	☑ Increase contrast of icon edges
	☑ Use Windows File Open Dialogs

OK

Cancel

Defaults

☐ Transparent dialogs become opaque when receiving focus
☐ All modeless dialogs use same transparency

0 [10   ] 100

Focus Item Description

Enable image processing to increase the contrast of icon edges.

Preferences

Position Mapping

Preferences [untitled]

Category
Database
Input
Look and Feel
Mouse Wheel
Operation
Position Mapping
Raster Manager
Reference
Spelling
Tags
Task Navigation
Text
View Options

Name for preferences Default Preferences

Set Position Mapping (Keyboard Navigation) Preferences.

☑ Use Position Mapping

☑ Show Position Mapping Aids

Main Toolbox Keys: 1234567890

View Toolbox Keys:

Task Toolbox Keys: QWERTASDFGZXCVB

Tool Settings Keys: YUIOPHJKL;NM,./

[Left Handed] [Right Handed]

[OK]

[Cancel]

[Defaults]

Focus Item Description

For more options, click on the category list at left.

Preferences

Task Navigation

Preferences [untitled]

Category
- Database
- Input
- Look and Feel
- Mouse Wheel
- Operation
- Position Mapping
- Raster Manager
- Reference
- Spelling
- Tags
- **Task Navigation**
- Text
- View Options

Name for preferences | Default Preferences

Task Navigation Preferences.

Presentation: Dialog

Icon Size: Small (16 x 16)

[OK]

[Cancel]

[Defaults]

Focus Item Description

For more options, click on the category list at left.

Preferences

View Options
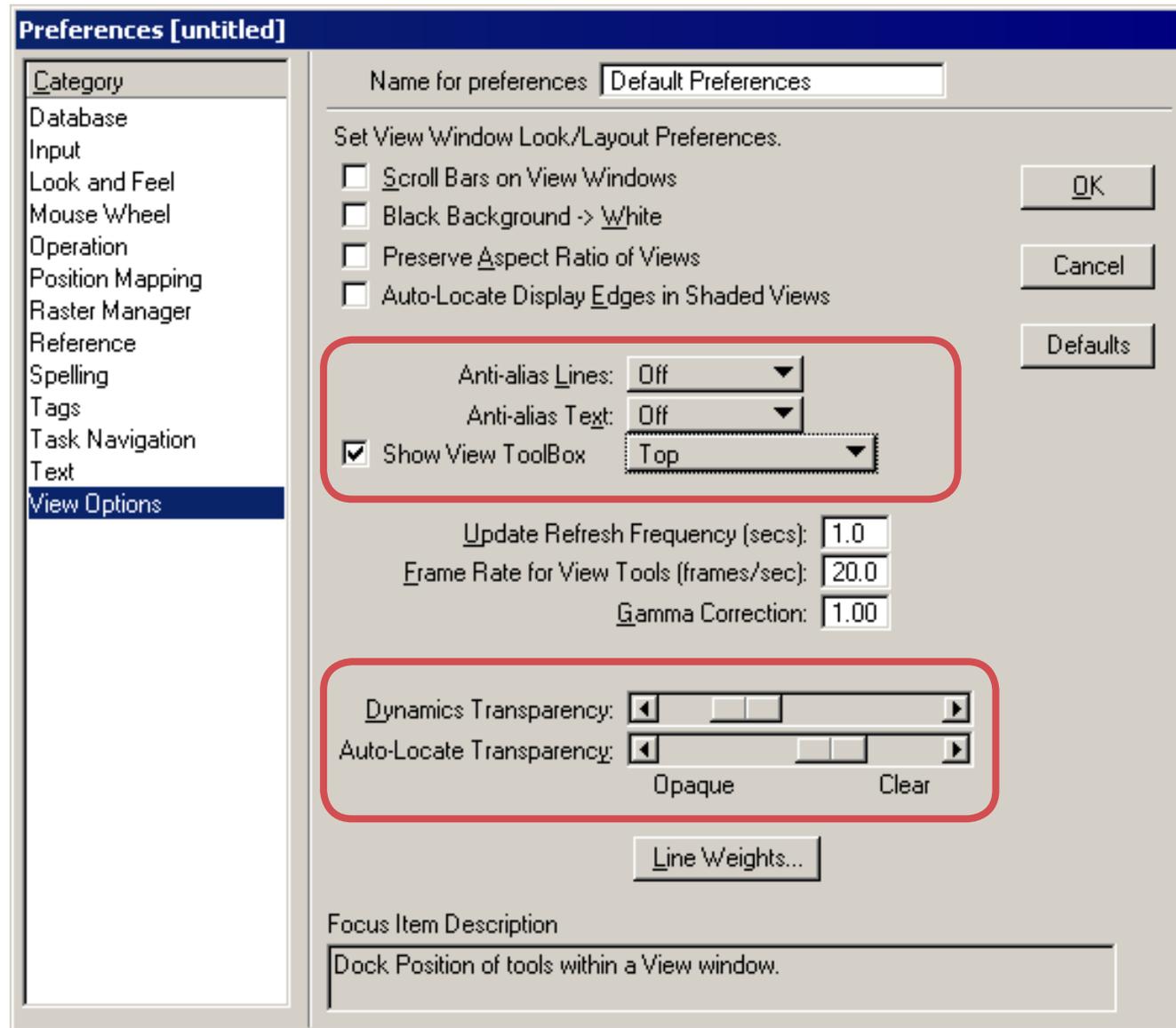
The view toolbox can be turned off or located on any edge of all view windows. Turn them off to encourage use of position mapping.

If you don't like the space wasted alongside the view tools set these variables to point to custom toolboxes designed to use the space:

MS_VIEWTOOLBOX2D = <tool_box_name>

MS_VIEWTOOLBOX3D = <tool_box_name>

GUI Customisation

Interface Dgnlibs

Put the dgnlib containing your interface custom menus and tools into ..\workspace\interfaces\MicroStation\<interfacename>

Set MS_GUIDGNLIBLIST to point to this location

Put your other dgnlibs into ..\workspace\standards\dgnlibs

Set MS_DGNLIBLIST to point to these, either by *.dgnlib or by listing the specific dgnlibs you want to use
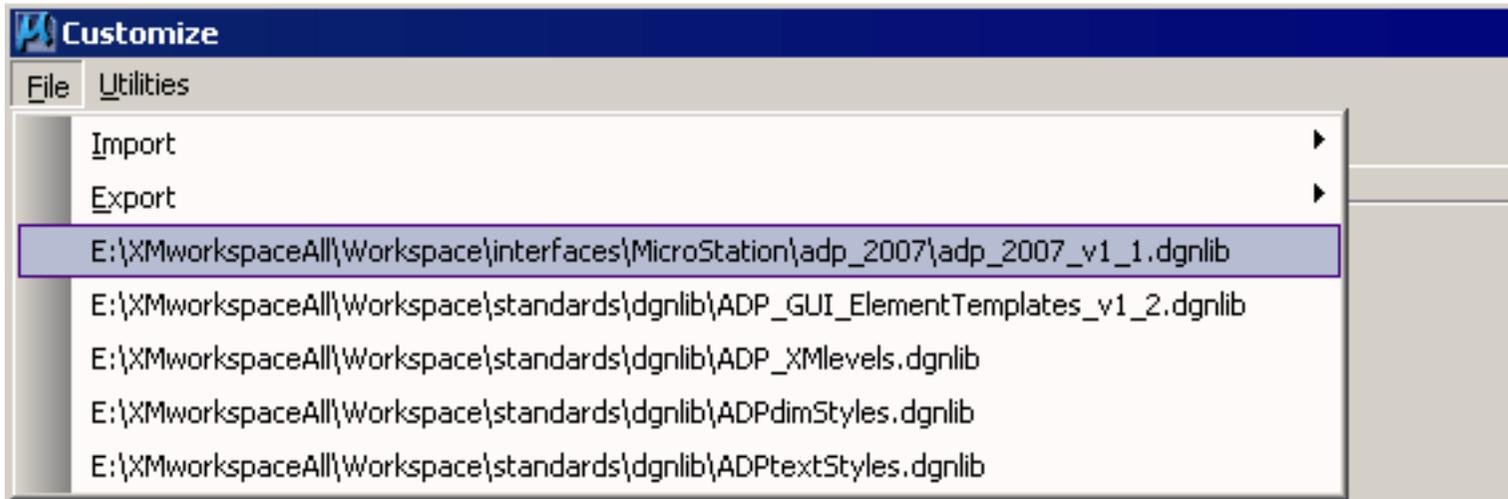
Element Templates in a nutshell

The key to custom tools and menus

Use ETs to replace macros, support/enforce standards
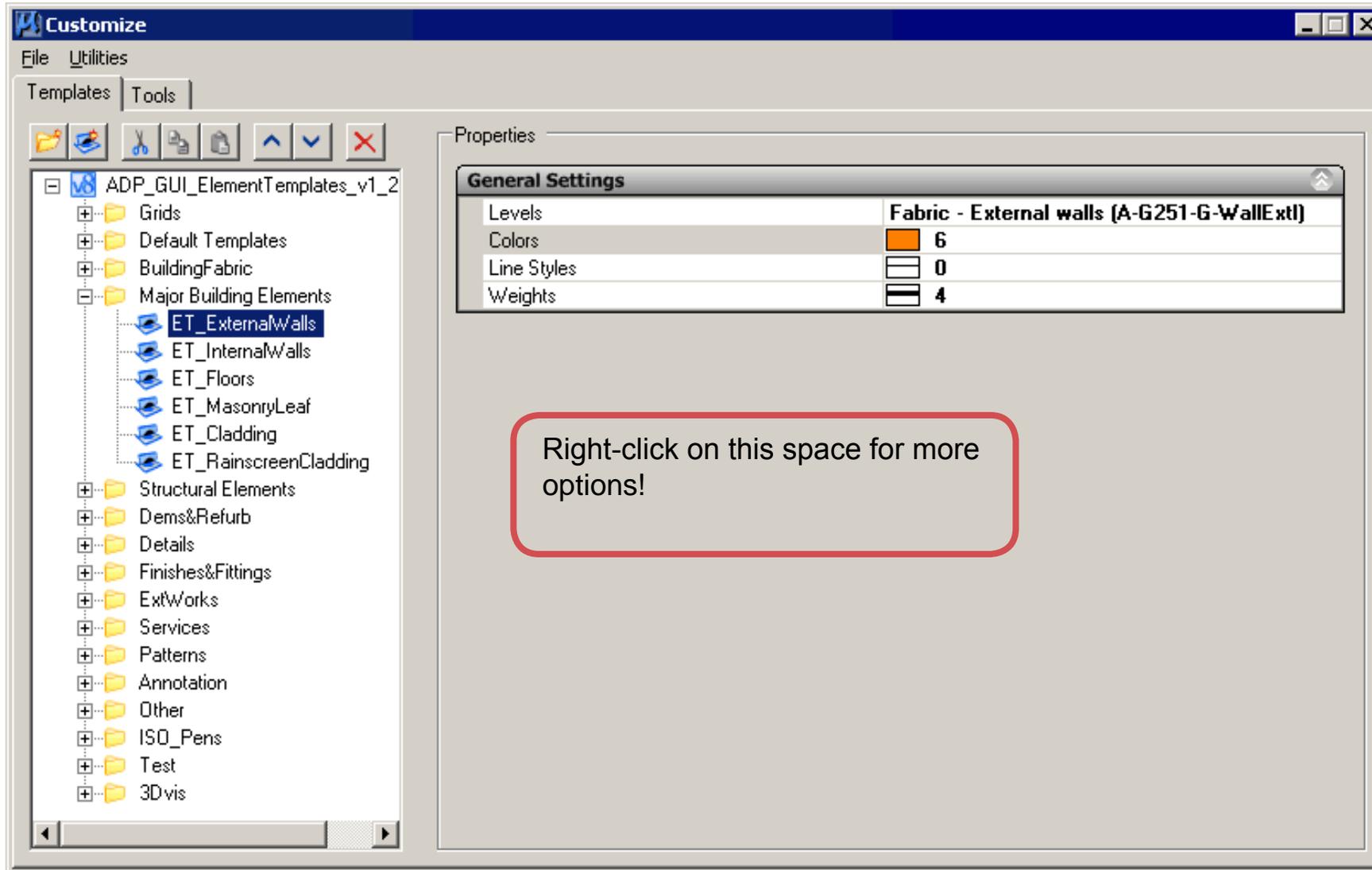
Project Explorer

"Projectwise Extra Lite"

Open the Project Explorer dialog: File > Project Explorer
Project Explorer allows you to create link sets grouping files of any type into sets contained in folders in whatever arrangement suits your project. Sets could be pre-defined or made up on the fly, handy but why duplicate the file system?
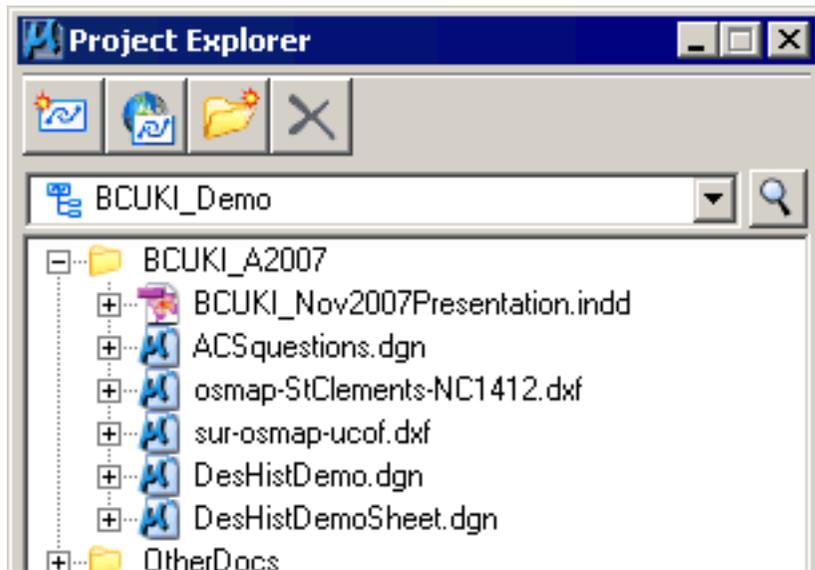
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Because you can see the models, Saved Views and References in the files

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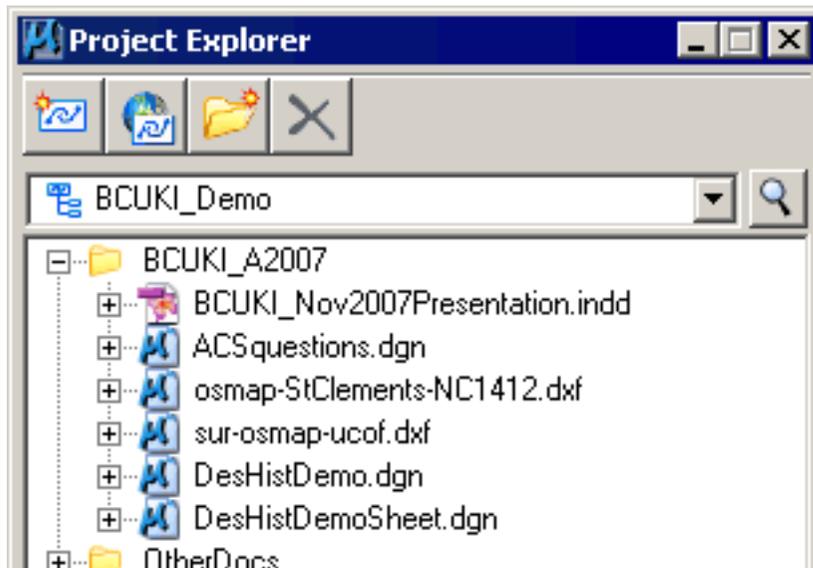
The Browse icon in this dialog opens the Link Set Manager from where you can select which Link Set to use.

Because you can see the models, Saved Views and References in the files
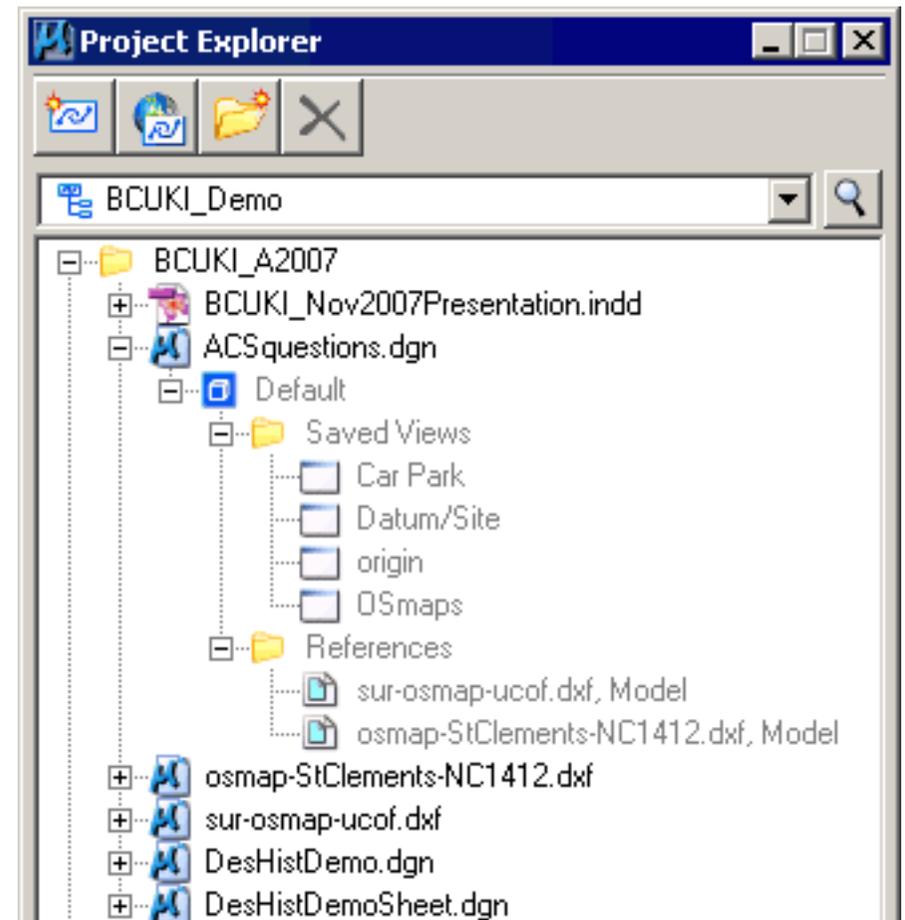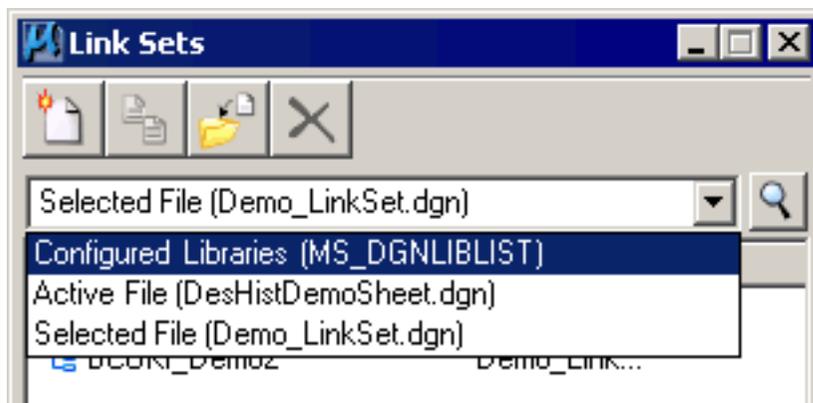
ACS Improvements

A better interface

The new Auxiliary Coordinates dialog makes using ACS much easier

- you can actually see what ACS are available
- import ACS from other files
- edit some ACS details in the dialog (but not the rotation angle!)
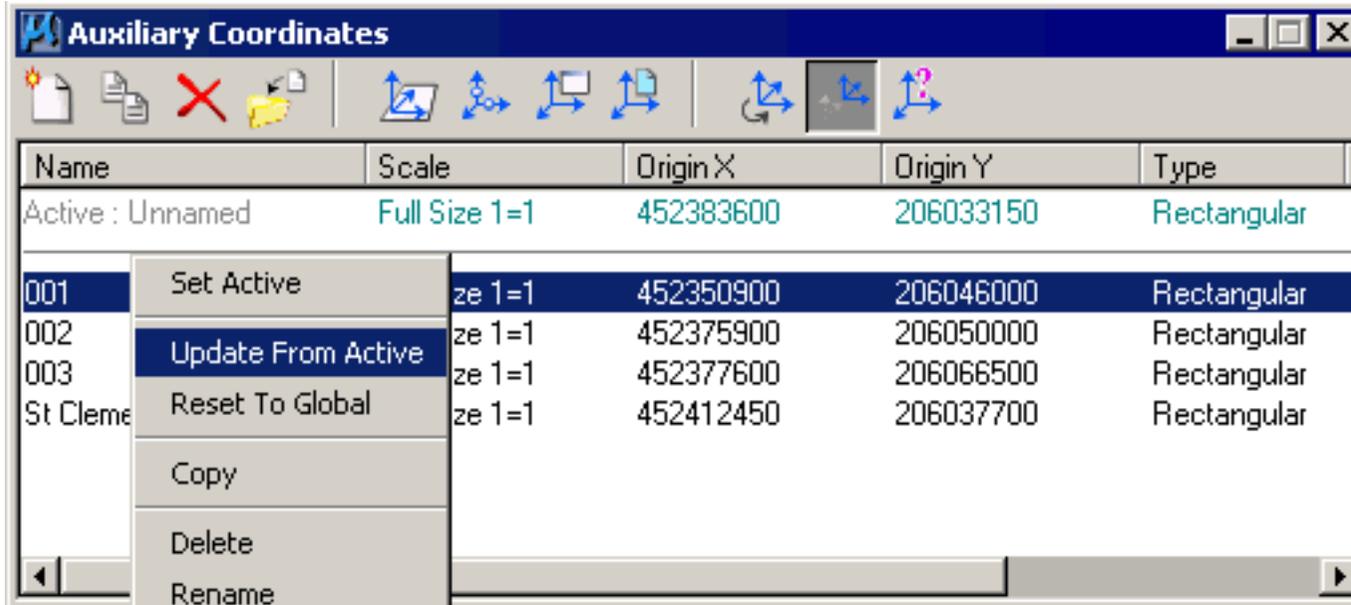
These improvements help to make working in real world locations a lot easier. Combine them with judicious use of Rotated and Saved Views (note the handy F6 shortcut to the Saved Views dialog) for effective management and navigation of project data. Goodbye to zooming in and out!
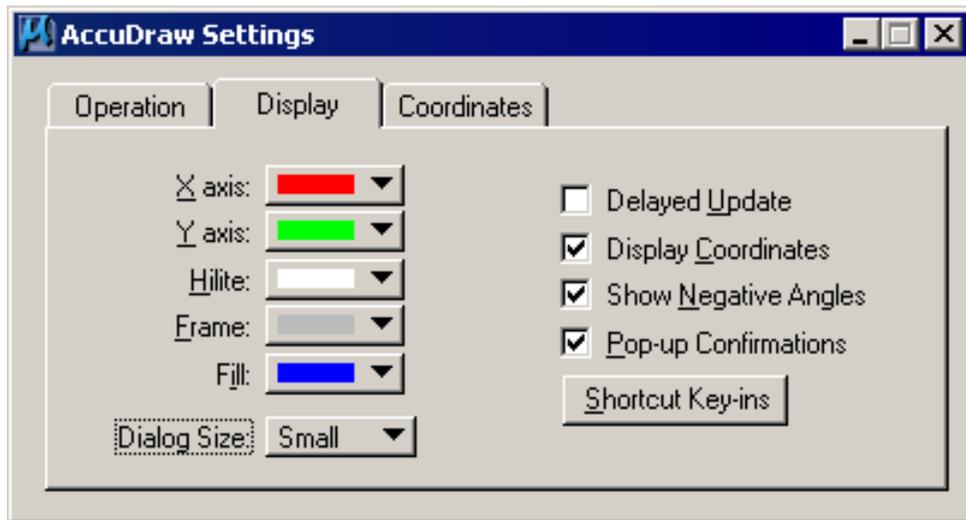
Do Patterns and measuring Rotate to the ACS? - Yes

AccuDraw and AccuSnap

AccuDraw

For the XM Edition AccuDraw features increased configurability, a more flexible Polar mode, and several added shortcut key-ins.
Showing Display Coordinates is a good addition.

AccuSnap

Use Shift + Ctrl to turn on AccuSnap when placing fences.

OR

If you don't like having AccuSnap on all the time use Shift + Ctrl to activate it on demand

Drawing Borders and Text

Working the old fashioned MicroStation way:

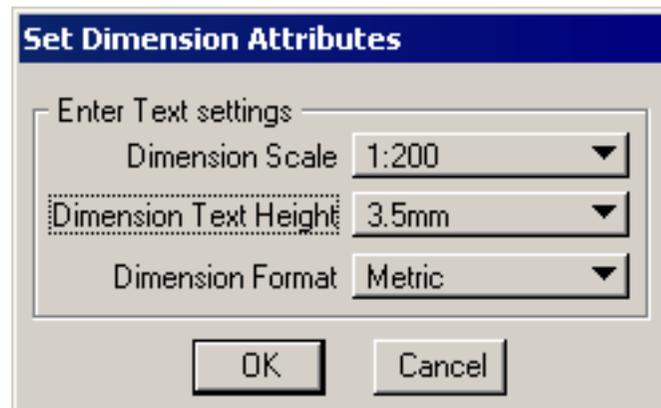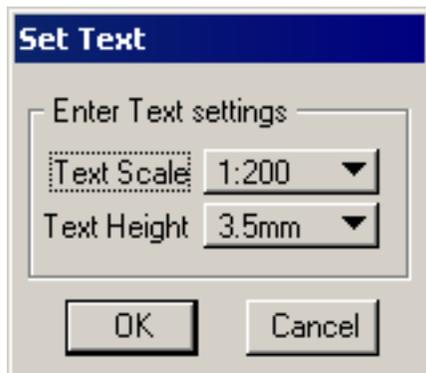ADP currently work with drawing borders as cells at 1:1 scaled up to the drawing.
This is done with a macro tweaked from V7 (not VBA yet, it works so not a priority to change)

Place Drawing Border

ADP Office	Oxford ▼
Sheet Size	A1 ▼
Drawing Scale	1:200 ▼

OK   Cancel
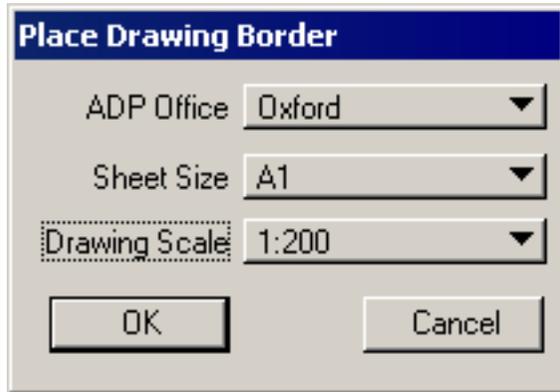
The user selects the Office, Sheet Size and Scale, then places the border.

Text and Dimensions

V8 separated text and dimension settings so we now have two macros to set sizes

Set Text

Enter Text settings

Text Scale	1:200 ▼
Text Height	3.5mm ▼

OK   Cancel

Set Dimension Attributes

Enter Text settings

Dimension Scale	1:200 ▼
Dimension Text Height	3.5mm ▼
Dimension Format	Metric ▼

OK   Cancel

Design History

Enable Design History

Two settings in your standards.cfg file:

MS_DESIGN_HISTORY=create=1;delete=0;commit=1;browse=1;tag=1;changedesc=1;changeauthor=0;combine=1;retire=0
;setrevisionformat=1;setversion=1;autoupgrade=1

These settings allow users to edit descriptions, combine a sequence of several revisions into a single revision, delete history and set major revision versions. Note changes to DH are recorded and viewed through the audit command. autoupgrade=1 will automatically upgrade older files to V8 XM design history.

The "stealth" setting is:
MS_DESIGN_HISTORY_COMMIT_ON_ CLOSE = 2

Users only need interact with it when they want to note specific revisions and change major revision status.

Design History

Design History Improvments

- Set Revision Number - use to define major revision points
- Combine - use to tidy up Design History by rolling up groups of revisions into one
- Retire - delete every revision from the start to a selected point

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Configure display of Design History

The underlying n.nn numbering of Design History can be now displayed in almost any way you want

- MS_DESIGN_HISTORY_REVISION_NUMBER_FORMAT sets the format in a config file at system or project level
- the key-in history manage set revisionformat sets the format in the design file

Format options:

- history manage set revisionformat {0,letter,AB,omit i,omit o}.{1} = A.1
- history manage set revisionformat {0}.{1} = 1.1 (the default)

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Attach reference by Design History Revision