

Configurations, DGNLibs and Workspaces

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“Putting it all together”

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2011 IBUG Fall Conference

September 28, 2011

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Introduction

- Basic Microstation installation has each user configuration, project configuration and interfaces on their local Drive.
- New project configurations are created by each individual user that they only view.
- Client workspaces are often loaded on each individual local drive.
- Users add the clients configuration files to their local drive for workspaces.

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CADD Manager Role

- How can the CADD manager enforce the Client's CADD standards?
- How does the CADD manager make updates for client's workspaces to each individual local drive?
- How can updates be easier for the CADD manager?
- How can the CADD manager share project configuration files between users?

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Solution for CADD Manager

- Use of Workspaces can help the CADD Manager.
- Best thing about Workspaces is they are so Flexible
- Worst thing about Workspaces is they are so Flexible.
- There is no single way to define a Workspace, which is what makes them the best and worst thing.

What is a Workspace

- Simple put - a Workspace is:
 - Configuration Variables
 - Workspace Data



What can Variables do for you??

■ A few examples

- Seed files
 - (MS_DESIGNSEED) Default Seed File for creating design files.
 - (MS_SEEDFILES) Search path(s) for all Seed Files
- DGMLIB files
 - (MS_DGMLIBLIST) DGMLIBs used as resource for your current session.
- Operation
 - (MS_OPENV7) Controls the behavior when opening V7 format files.
- Capabilities – Search for a file called **capability.list** (A few favorites)
 - CAPABILITY_LEVELS_ALLOW_CREATE
 - CAPABILITY_LEVELS_ALLOW_DELETE
 - CAPABILITY_ELEMENT_TRANSPARENCY



capability.list file

And the list goes on forever!

Check out http://communities.bentley.com/products/microstation/w/microstation__wiki/microstation-v8i-variables-tn.aspx

Or...do what I do... Google Search = "V8i" +variables

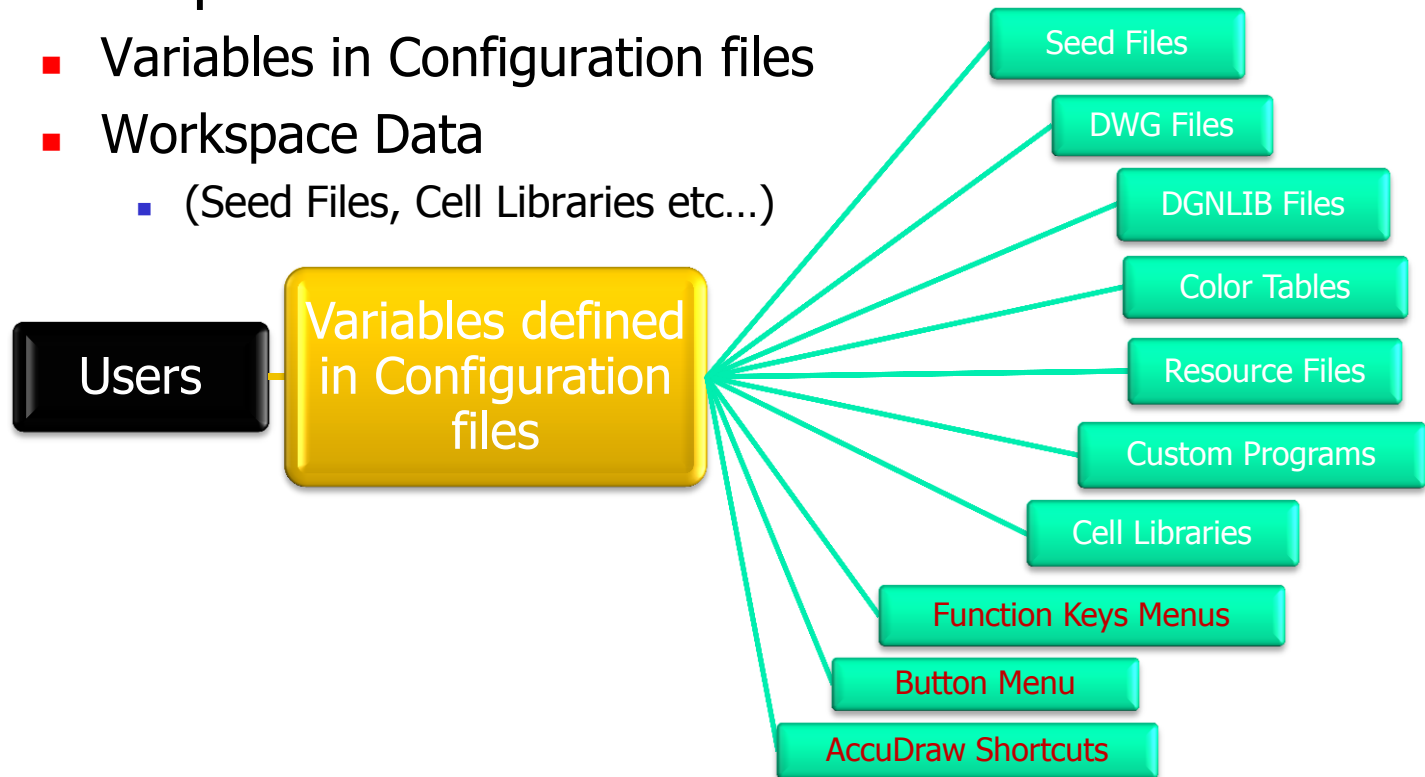
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What is a Workspace Data?

- Seed Files
 - 2D or 3D, Metric or English
- DWG Files
 - Translation file, Blocks, Line Style, Alias file, Fonts etc...
- Cell Libraries
 - Different disciplines
- DGNLIB Files
 - Too much to list...
- Resource Files
 - Line Styles, Fonts...
- Color Tables
- Custom Programs
 - Macros, VBAs or MDLs
- User's Data
 - AccuDraw Shortcuts, Button menus, Function Key

Putting it all Together

- Workspaces are:
 - Variables in Configuration files
 - Workspace Data
 - (Seed Files, Cell Libraries etc...)



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IDOT Roadway Workspaces

- IDOT Division of Highways has a Workspace established for Roadways
 - Configuration Variables for Roadways is contained in IDOTCAD.pcf
 - Workspace Data for Roadways is contained in IDOT_v2004.exe (<http://www.dot.il.gov/cadd.html>)
 - Cells
 - Linetypes
 - Seed Files
 - Fonts
 - DGNLibs
 - Macros
 - VBA's
 - MDLApps

IDOT Bridge and Structures Workspaces

- IDOT Bridge and Structures has the Workspace Data:
 - <http://www.dot.il.gov/bridges/bscadd2.html>
 - Cells
 - Color Table
 - DGNLib
 - Seed Files
 - Linestyles
 - Fonts
 - However, no configuration variables established.

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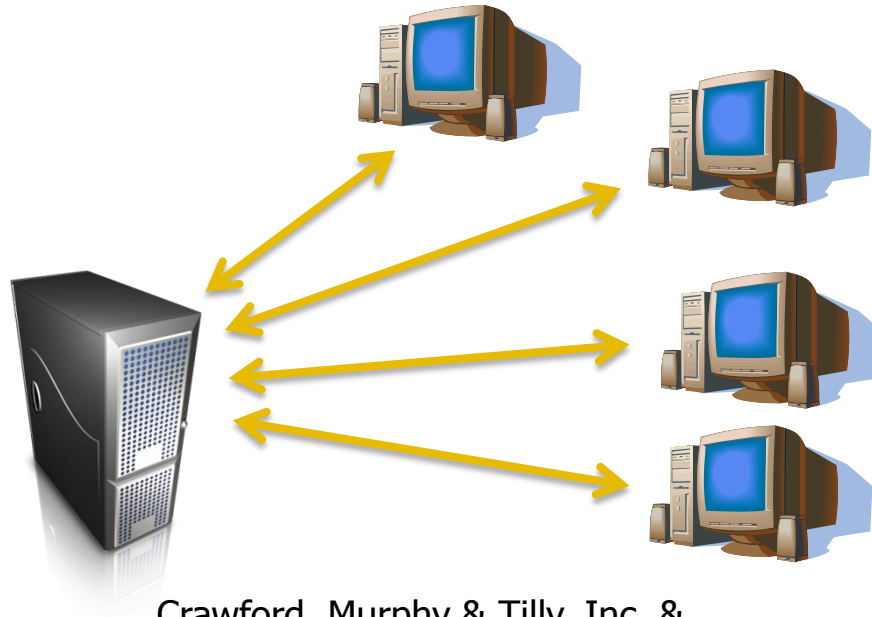
Why Use a Workspace?

- Limit the amount of work done or lost on the local drive.
- Centralize the Workspace Data
 - Everything on the Server. One location = one source
- Deploy Standards
 - One set of Cell Libraries, Resource Files, DGN Library files in an office.
 - Centralize workspace updates to one location that can be mimicked to other offices/Districts.
- Enforce Standards
- Check Standards
 - DGN Library files work with Standards Checker Utility
- Users have the tools and files they need
 - CAD Manager can control it all from their desk.
- Makes live easier for the CAD Manager.

How Did We Get Here?

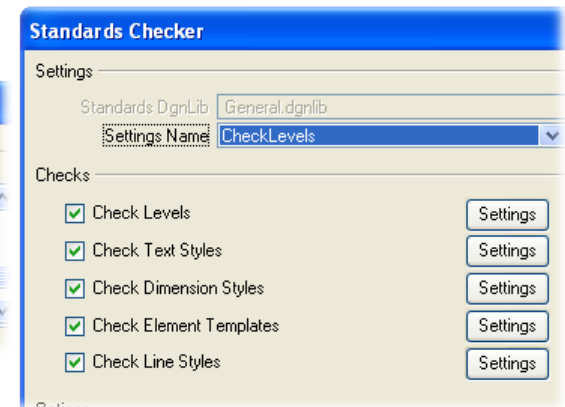
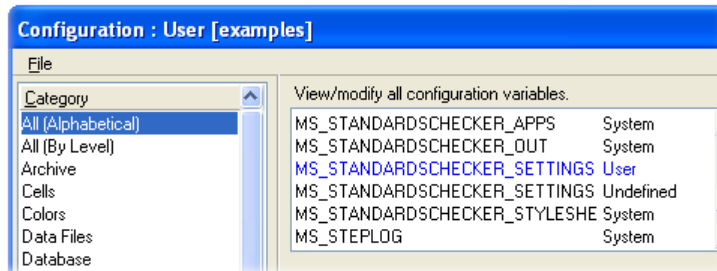
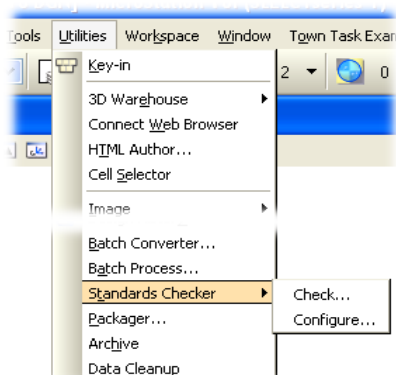
■ Centralize Workspace Data?

- On a Local Server choose the same location on the network for every office/District to use for CADD settings and workspace settings.
- May not always work with Offsite Users
- What about Laptop Users away from the Server?



How Did We Get There?

- Deploy Standards
- Enforce Standards
 - DGNLib files used with Standards Checker
 - Once you are using DGNLIB files, they can be used with the Standards Checker Utility to check:
 - Levels
 - Dimension and Text Styles
 - Line Styles
 - Element Templates



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What is in a DGNLib File?

- User Interface customizations such as tools, menus, etc.
- Level Definitions and Level Filters
- Text Styles
- Dimension Styles
- Detailing Symbol Styles (new variables for this in V8i)
- Plot Styles
- Multi-Line Styles
- Display Styles
- Saved Views (did you know this?)
- Cell definitions (did you know this?)
- Project Explorer link sets
- Color Books
- Custom Line Styles (did you know this too?)
- Standards Checker information
- Named Expressions
- Element Templates
- Render Setups

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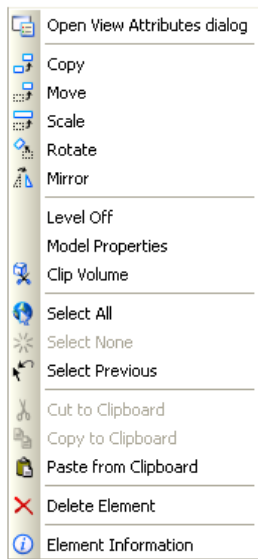
DGNLib Configuration Variables?

- Variables that control DGNLibs:

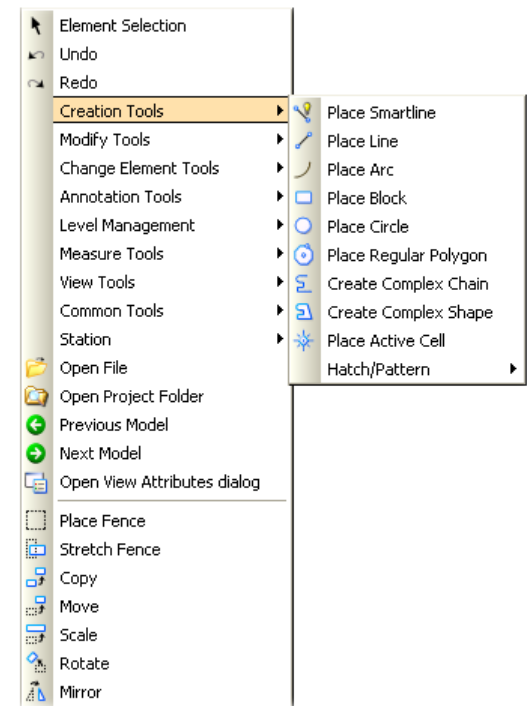
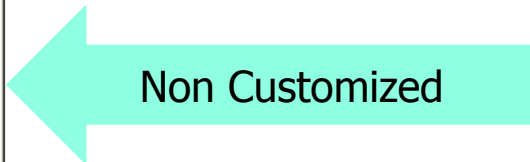
Variable Name	Short Description
MS_LEVEL_ALLOW_LIBRARY_LEVEL_EDIT	Edit Unused Library Levels
MS_LEVEL_LOAD_ATTACHMENT_FILTERS	Load Attachment Level Filters
MS_LEVEL_EDIT_ATTRIBUTE_LIST	Control Level Attributes Edit
MS_LEVEL_SYNC_ATTRIBUTE_LIST	Control Level Attributes Sync
MS_LEVEL_AUTO_SYNC_ATTRIBUTE_LIST	Level Attribute Auto Synchron.
MS_UPDATE_KEEP_UNUSED_LIBRARY_LEVELS	Keep Unused Library Levels
MS_LEVEL_LIB_DIR	Level Library Path

Interface Customization

- Task Navigation and Interface Customization
 - Client issued Interface
 - Company Wide Interface
 - User's personal customized Interface



Press and hold Reset



Variables for Interface Customization

- Task Navigation and Interface Customization
 - Client issued Interface
 - Company Wide Interface
 - User's personal customized Interface

- Some Variables for controlling customization
 - MS_GUIDGNLIBLIST
 - Lists directories containing DGN library files that store tools, toolbox, task, menu, and icon customizations.
 - _USTN_SYSTEM_GUIDGNLIBLIST
 - Don't mess with this one! This one points to ustation.dgnlib which could be updated in next build
 - *(Update... We are breaking up the ustation.dgnlib file into separate DGNLIB files... something about the FTC said the file had a monopoly)*

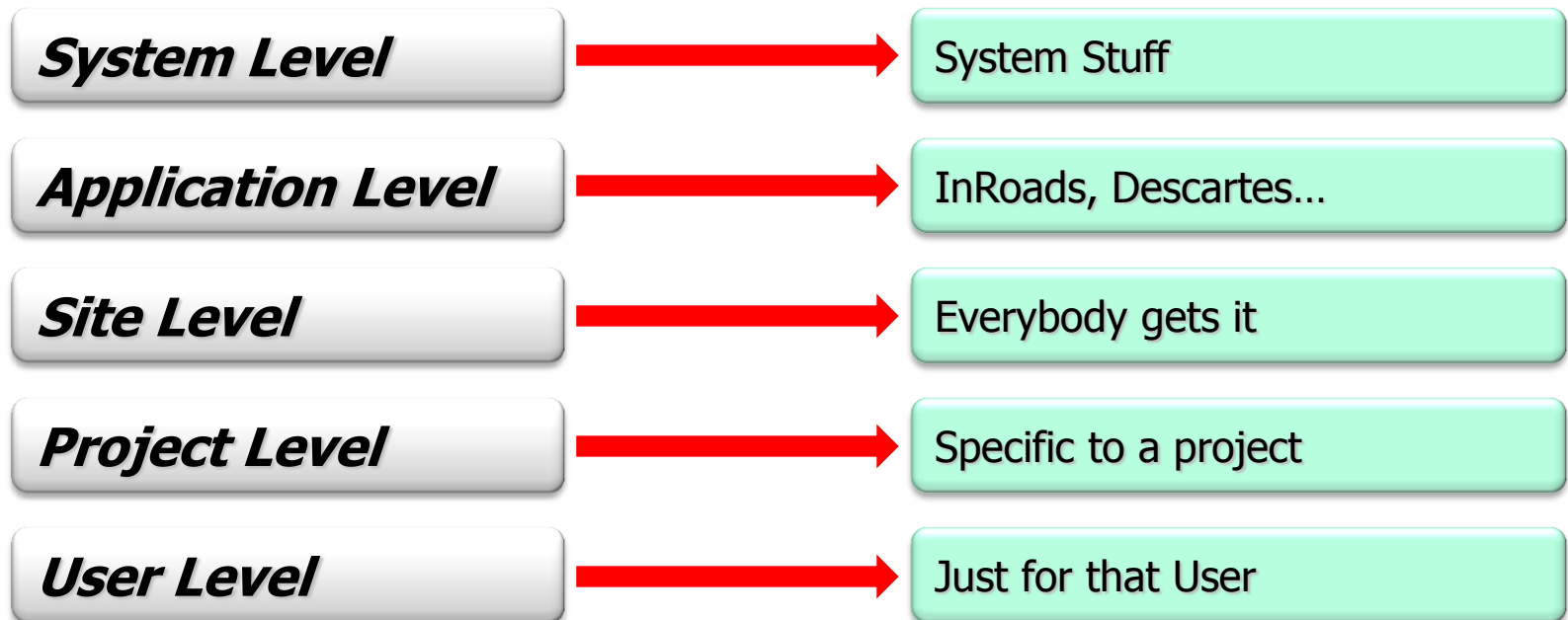
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How Did We Get There?

- Integrating Configuration files into the startup process
 - What is the startup process of MicroStation?
 - What is a redirect file?
 - Where is the best place to redirect MicroStation to look to the Server?
- Use configuration variables to redirect the location of project configuration files and user files to a centralized network location.
 - Place a Workspace.cfg file in the Standards (or Appl) Directory to redirect Microstation to a centralized network location.
 - Set up configuration files on the network to customization the office's/company's Microstation settings.

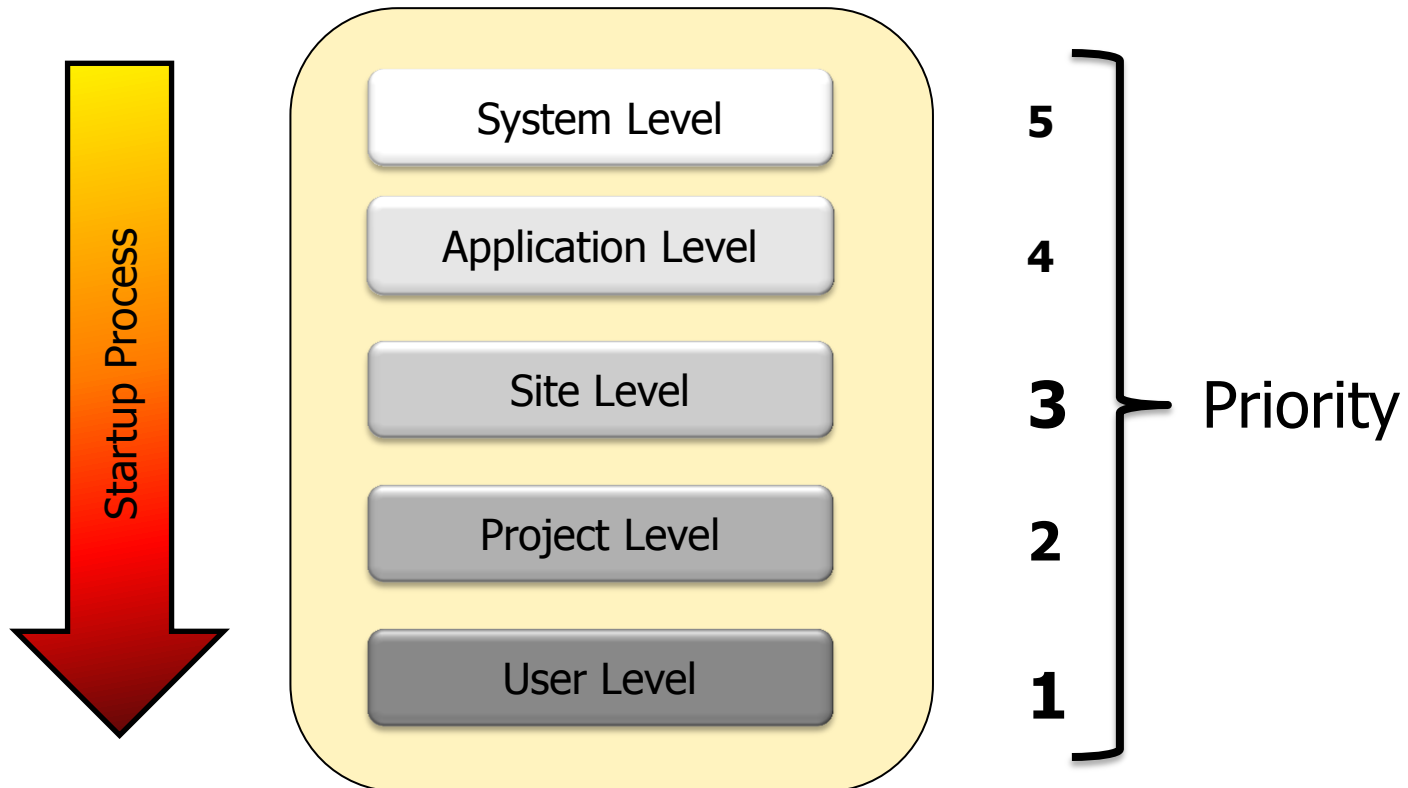
How Variables are Processed

- The order that Variables are processed



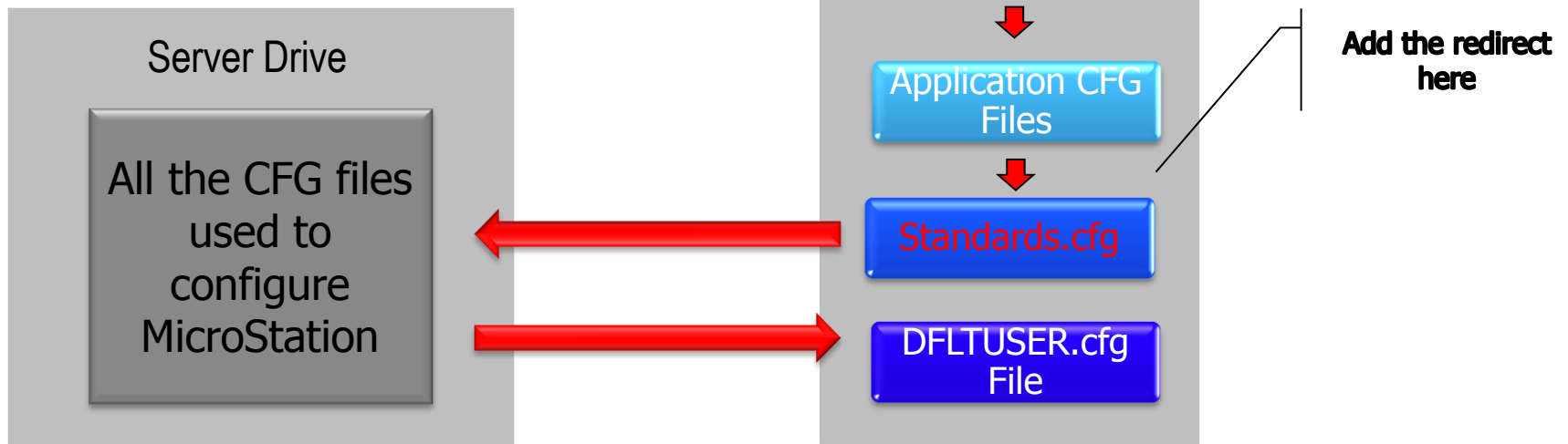
How Did We Get There?

- Startup order and Variable priority



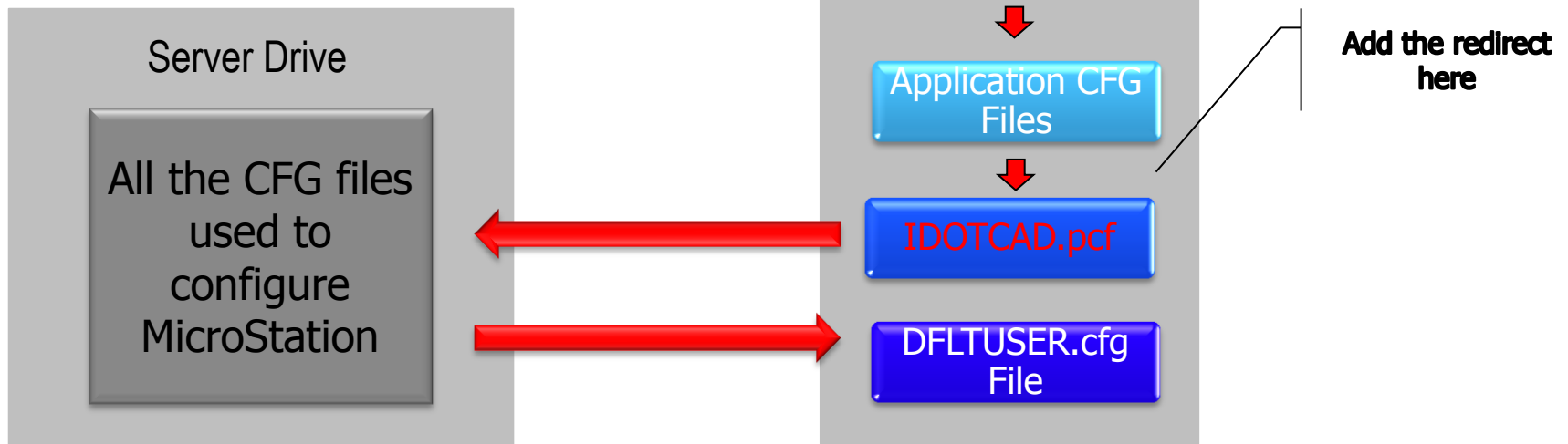
Redirect Scenario

- One possible location to redirect MicroStation to look to the Server for additional Configuration files to process.



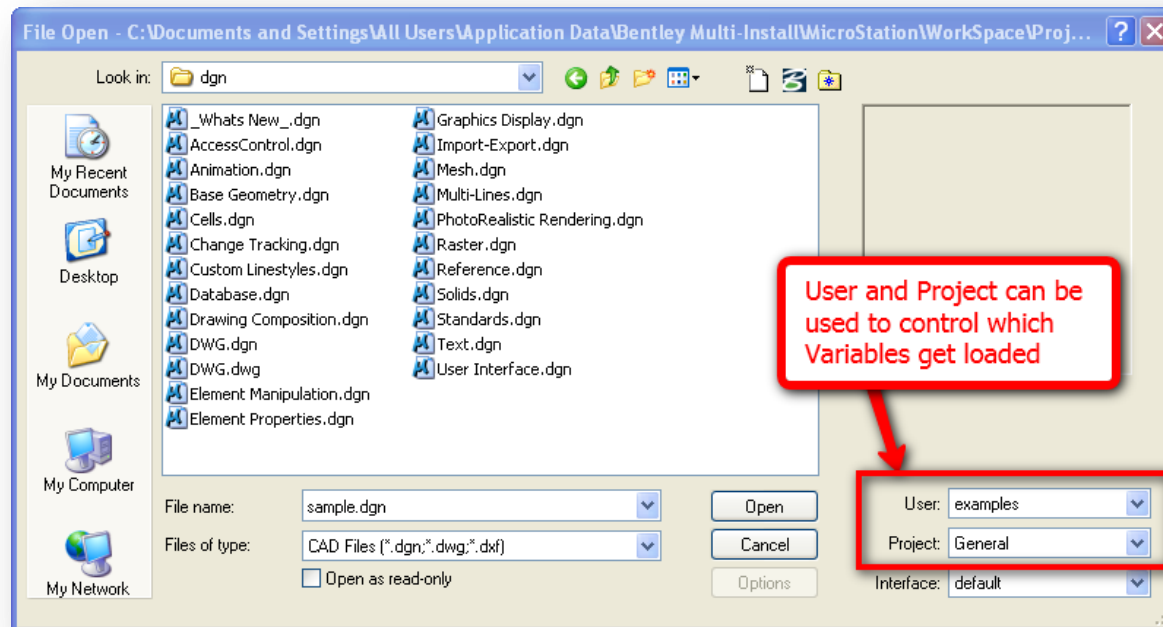
Redirect Scenario - IDOT

- One possible location to redirect MicroStation to look to the Server for additional Configuration files to process.



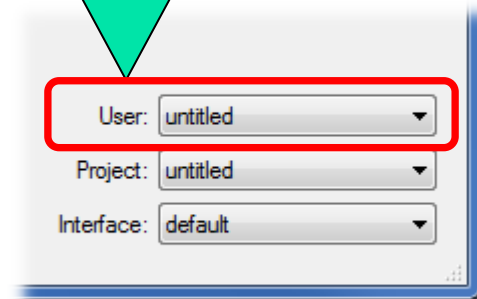
Fork in the Road?

- Main fork in the road... Open File Dialog



User Configuration Files

- Possible Uses for **User**:
 - **User** could be:
 - **User** = Login name (LAN ID)
 - **User** = Discipline
 - Roadway
 - Bridges and Structures
 - Mapping
 - **User** = Project related:
 - District related project
 - County related project
 - ACOE related project
 - **User** = Just to control where to look for PCF files

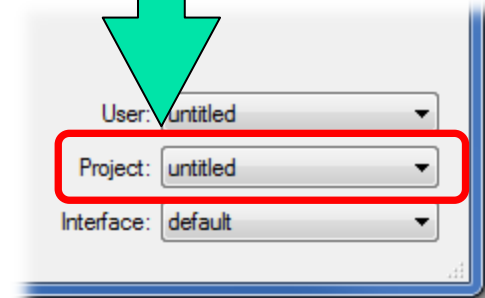


Project Configuration Files

■ Possible Uses for **Project**

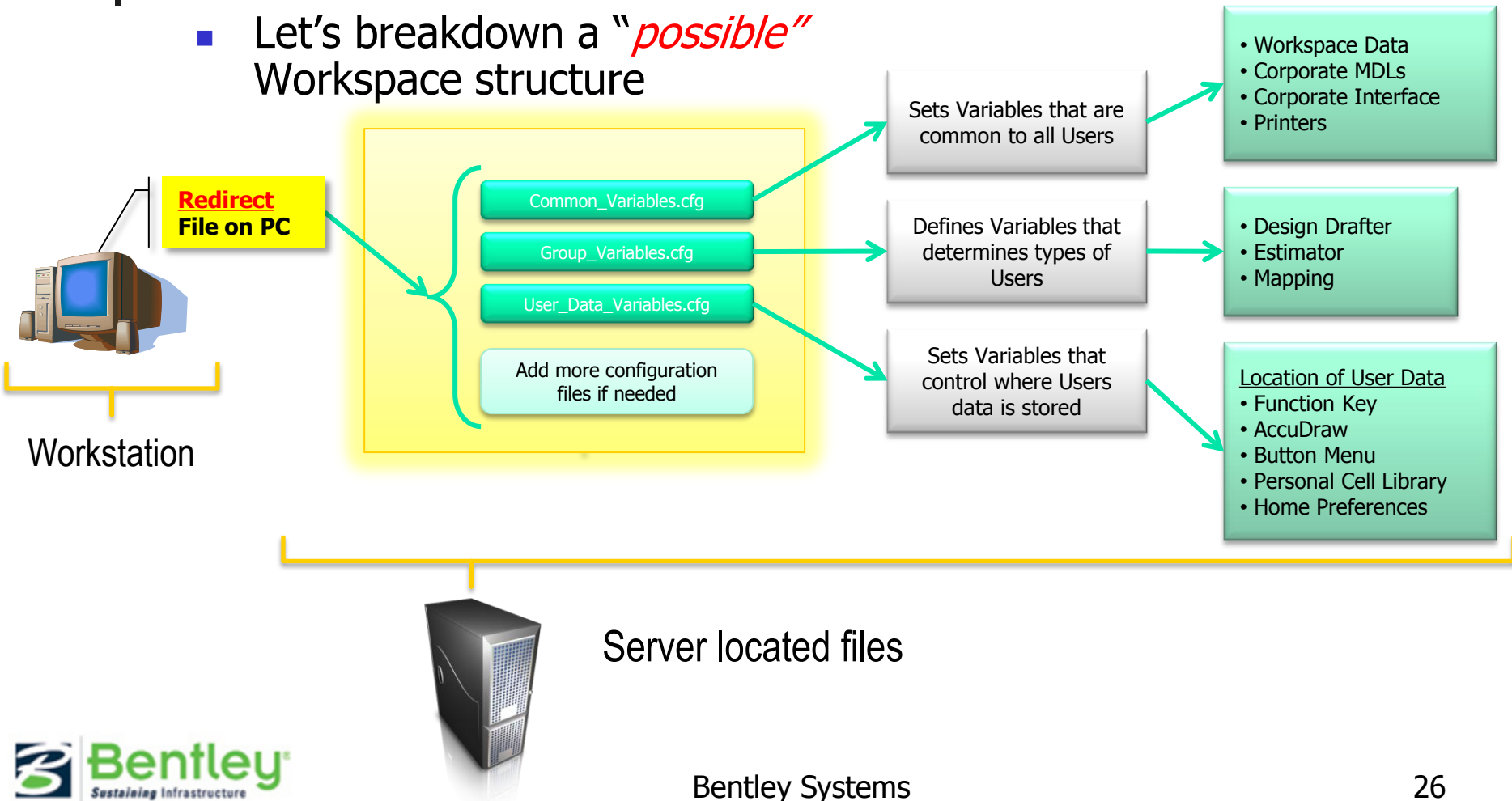
Project could be:

- **Project** = Client related
 - Single PCF file concept (IDOTCAD.pcf)
 - Multiple PCF file concept (one for each Client)
- **Project** = Project related
 - Multiple PCF file concept
 - One PCF file for each Project number
- **Project** = Type of User
 - Roadway (IDOTCAD.pcf)
 - Bridges and Structures
 - Mapping
 - V7 or V8



Possible Workspace Structure

- Let's breakdown a "*possible*" Workspace structure



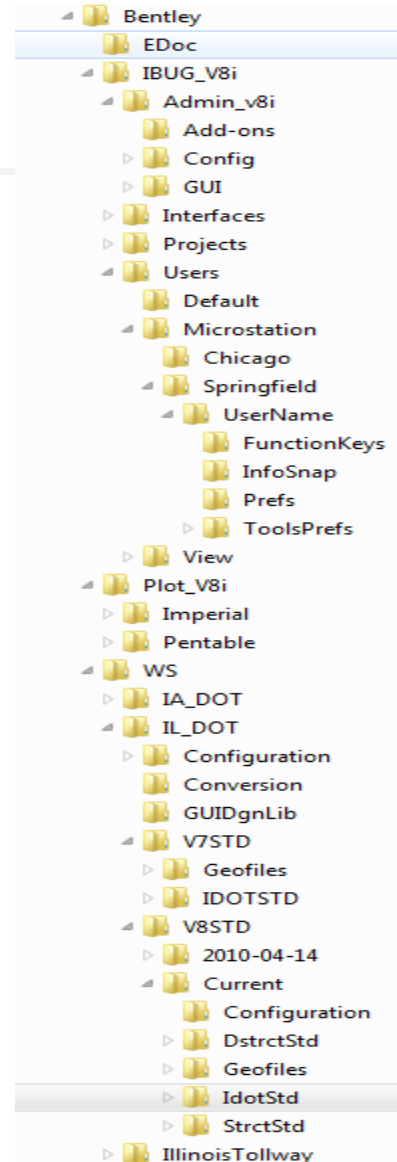
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User Data Variables

- Use configuration variables to redirect the location of project configuration files and user files to a centralized network location.
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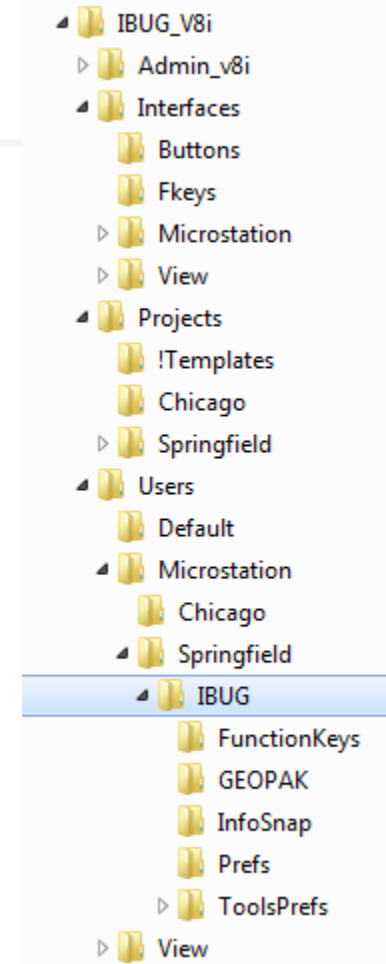
Centralized Folders

- Choose a location on the network for Microstation files.
- Determine what files to keep centralized on the Network:
 - Workspace Data
 - GUI
 - Microstation Add-ons
 - Plotter drivers
 - Interfaces
 - Projects
 - Function Keys
 - User Configuration
 - Preferences



Benefits of Centralizing

- Project and User Configurations for each office/District are one Central location.
- Users see the exact same project configuration files.
- Project configuration file determines which workspace is loaded.
- Users must select a project to see the Client's Workspace resource files.



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Project Microstation Variables

- Workspace information
%include Clients_Local.cfg
- Project specific variables
 - _USTN_PROJECTDESCR
 - _USTN_PROJECTSROOT
 - _USTN_PROJECTDATA
 - MS_DEF
 - MS_RFDIR
 - MS_REF_DEFAULTATTACHDIRECTORY
 - PLOT CONFIGURATION VARIABLES
 - MS_LEVEL_AUTO_SYNC_ATTRIBUTE_LIST

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Project Geopak Variables

- Project Specific Geopak Variables
 - GPK_USERPREF_WORKINGDIR
 - GPK_PROJMGR_PROJECTDIR
 - GPK_MY_CRITERIADIR
 - GPK_SHEETCLP_SHEET_LIBRARY_DIR
 - GPK_SHEETCLP_SHEET_LIBRARY_NAME
 - GPK_SHEETCLP_SHEET_OUTPUT_DIR
 - GPK_XS_SHEET_LIBRARY_DIR
 - GPK_XS_SHEET_LIBRARY_NAME

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Utilizing Project Templates

- Create project templates for new projects and associate projects with workspaces.
- Include drawing file locations and reference file locations in the project configuration.
- Standardize project plot settings
- Lock workspace files from editing
- Configure geopak settings for each project
 - File and project manager locations
 - Preference files and settings
 - Developing sheets

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Summary

- Centralize configuration files to one location
- Use configuration variables to centralize workspaces
- Use configuration variables to redirect Microstation to a network location
- Update the client workspaces in one location
- Lock the client workspaces

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Thanks

Thanks for attending!

- Thanks to Sam Hendrick at Bentley for his help in creating this presentation and sharing his slides.