



MicroStation CONNECT Edition Upgrade Awareness Guide

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Bentley Systems, Incorporated

TABLE OF CONTENTS

OVERVIEW	3
WHY YOU SHOULD UPGRADE TO MICROSTATION CONNECT EDITION	4
Connected User Experience/User Interface.....	4
Documentation	4
Modeling.....	4
Printing.....	4
Visualization.....	4
Interoperability	4
Extensibility.....	4
Administration	4
CONNECT Edition Features by Industry	5
MIGRATION OPTIONS AND CONSIDERATIONS.....	6
MicroStation CONNECT Edition Changes.....	7
MIGRATION ROADMAP	8
MIGRATION PLANNING	9
Software Applications	9
Operating Environment	9
Review Workflows & Customizations	9
Resource Items and Standards.....	10
User Interface	10
Legacy Data	10
Licensing.....	10
Timeline.....	10
MIGRATION TOOLS	10
Configuration Migration Wizard	10
Advanced Ribbon	11

SERVICES AVAILABLE	11
MicroStation CONNECT Edition Upgrade - Complete	11
Custom Upgrade Services	12
Workflow Analysis Package.....	12
CAD Administration Workshop Package.....	12
CAD Administrator/SME Training.....	12
End User Training	13
Project Coaching	13
Recurring Services Package.....	13
APPENDIX A – HELPFUL LINKS	14

MicroStation Product Advancement

OVERVIEW

Use MicroStation CONNECT Edition to deliver projects smarter. With proven MicroStation technology, you can confidently take on any design, construction, or operations project. No matter what design information you are working with or what kind of deliverables are required, you can rely on MicroStation's flexibility and power to get the job done on time and on budget.

MicroStation's advanced parametric 3D modeling capabilities allow infrastructure professionals of any discipline to deliver data-driven, BIM-ready models. Your team can aggregate their work on MicroStation, including designs and models created with Bentley's discipline specific BIM applications. As a result, you can create comprehensive, multi-discipline BIM models, documentation, and other deliverables. Since your project team will work in a universal modeling application, they can communicate easily to share intelligent deliverables and maintain the full integrity of your data.



The MicroStation family of products provide the power and versatility to precisely view, model, document, and visualize information-rich 2D and 3D designs of all types and scales for professionals in every discipline on infrastructure projects of every type.

- MicroStation and all Bentley BIM applications are built on the same comprehensive modeling platform.
- You therefore can easily progress your MicroStation work into discipline specific workflows with Bentley's design and analytical modeling BIM applications.
- With this flexibility, each member of your project team has exactly the right application for the work they need to do AND they'll get all the advantages of BIM without the need to change existing workflows!

WHY YOU SHOULD UPGRADE TO MICROSTATION CONNECT EDITION

The most intuitive and efficient MicroStation yet! Here are the MicroStation CONNECT Edition advantages.

Connected User Experience/User Interface

- Personalized product recommendations
- Easier sharing of product content
- Faster access to related tools with integrated search
- Easy navigation and faster learning are provided through standard ribbon interface

Documentation

- Speed and ensure drawing consistency
- Ensure consistency and accuracy of annotation
- Simplify and streamline the control of the appearance of drawings
- Automate creation and update to reports and tables

Modeling

- Explore more design alternatives
- Simplify modeling workflows
- Create and share more flexible, reusable parametric content

Printing

- Offload plotting processing
- Combine all types of project content in plot sets in a single operation, including raster and PDF

Visualization

- Accelerate rendering
- Make textured surfaces seamless

Interoperability

- Use/share RealDWG 2015 data, JT format and IFC CV2.0

Extensibility

- Non-programmers can easily record and repeat common tasks
- Macros can be promoted to VBA for downstream use

Administration

- Deploy MicroStation using virtualized environments
- Easily and more quickly deploy non-English versions

CONNECT Edition Features by Industry

Road/Rail	Building	Utilities/Geospatial	Plant/Process	Structural Detailing	Electrical
Geocoordination	AutoCAD interoperability	Geocoordination	Component Center	Accelerated sheet creation	Property-driven annotation
LumenRT Integration	Component Center	Property-driven display	Comprehensive 3D modeling	Standards Management & Validation	Standards Management & Validation
Mesh Modeling	Comprehensive 3D modeling	Property-driven reports	i-models	AutoCAD interoperability	AutoCAD interoperability
Point Clouds	Hypermodeling	Reality mesh classifier	PDS Support	Component Center	Component Center
Raster Image Draping	IFC Support	Reality Mesh support	Point Clouds	CONNECT Advisor	CONNECT Advisor
Reality Mesh support	LumenRT Integration	SHP Support	Property-driven reports	Persistent Constraints	Hypermodeling
SHP Support	Luxology Rendering	Standards Management & Validation	Standards Management & Validation	Project Sharing Service	Project Sharing Service
Standards Management & Validation	Mesh Modeling	Web Map Server	CONNECT Advisor	Property-driven annotation	Property-driven reports
Terrain Models/LandXML	Persistent Constraints	3D PDF with item properties	Hypermodeling	Property-driven reports	3D PDF with item properties
Traffic Animation	Point Clouds	AutoCAD interoperability	Item Types	Sheet indexing	Accelerated sheet creation
Accelerated sheet creation	Property-driven annotation	CONNECT Advisor	JT Support	3D PDF with item properties	Automatic Updates
AutoCAD interoperability	Property-driven reports	Geometry Stamping	LumenRT Integration	Automatic Updates	Comprehensive 3D modeling
Component Center	Reality Mesh support	Geospatial PDF	Project Sharing Service	Comprehensive 3D modeling	Functional Components
Comprehensive 3D modeling	RFA content support	GPS Device Integration	Property-driven annotation	Functional Components	Issue Resolution
CONNECT Advisor	Standards Management & Validation	i-models	Property-driven display	Hypermodeling	Item Types
Functional Components	3D PDF with item properties	Item Types	Reality Mesh support	Issue Resolution	Performance Dashboards
Geometry Stamping	Accelerated sheet creation	LumenRT Integration	Sheet indexing	LumenRT Integration	Persistent Constraints
Geospatial PDF	CONNECT Advisor	Mesh Modeling	3D PDF with item properties	Performance Dashboards	Property-driven display
GPS Device Integration	FBX, 3DS, 3DM, OBJ, SKP Support	Point Clouds	Accelerated sheet creation	Property-driven display	Reality Mesh support
Hypermodeling	Functional Components	Project Sharing Service	AutoCAD interoperability	i-models	Sheet indexing

MIGRATION OPTIONS AND CONSIDERATIONS

There are many items to consider and decisions to be made when planning a successful migration path to MicroStation CONNECT Edition. The suggested migration path is to move directly from your current MicroStation version to MicroStation CONNECT Edition. In some cases, the recommendation is to maintain some groups/projects on the current versions and migrate new projects to MicroStation CONNECT Edition first, and then bring the other groups/project forward over time*.



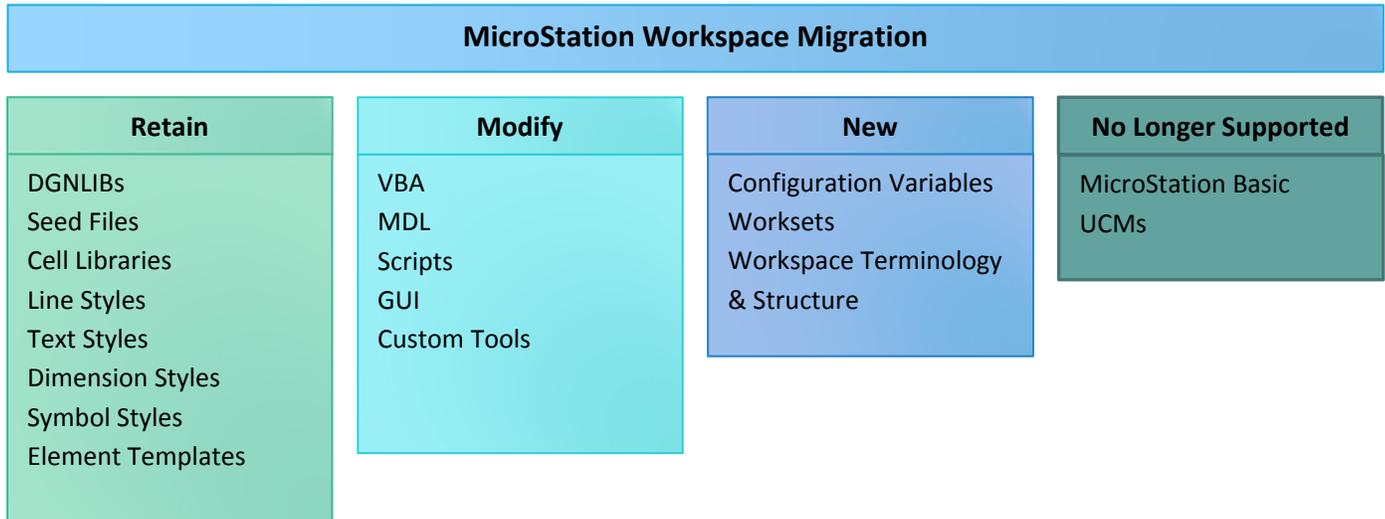
**Note that occasionally using a phased approach that implements MicroStation V8i SELECTseries 4 prior to moving to MicroStation CONNECT Edition might be recommended based on the needs and goals of the organization.*

In addition to looking at the base MicroStation product upgrade, users must also consider the upgrade availability and interaction with other products utilized in their production workflow. Some products to consider include:

- ProjectWise
- ProjectWise Plotting
- Bentley Descartes
- Bentley Navigator
- Other discipline-specific products/applications/Brands such as InRoads, AECOsim, OpenPlant, etc.

MicroStation CONNECT Edition Changes

There were a number of new functions and workflows that were added to MicroStation CONNECT Edition. To support the new functions, there are several modifications and additions to the workspace that are needed as outlined in the chart below:



Retain – there are a number of workspace items that remain unchanged or only need minor modifications.

Modify – customizations using VBA, MDL, etc. that need to be retained will need modifications.

New – new Workspace configuration and capabilities may need to be implemented.

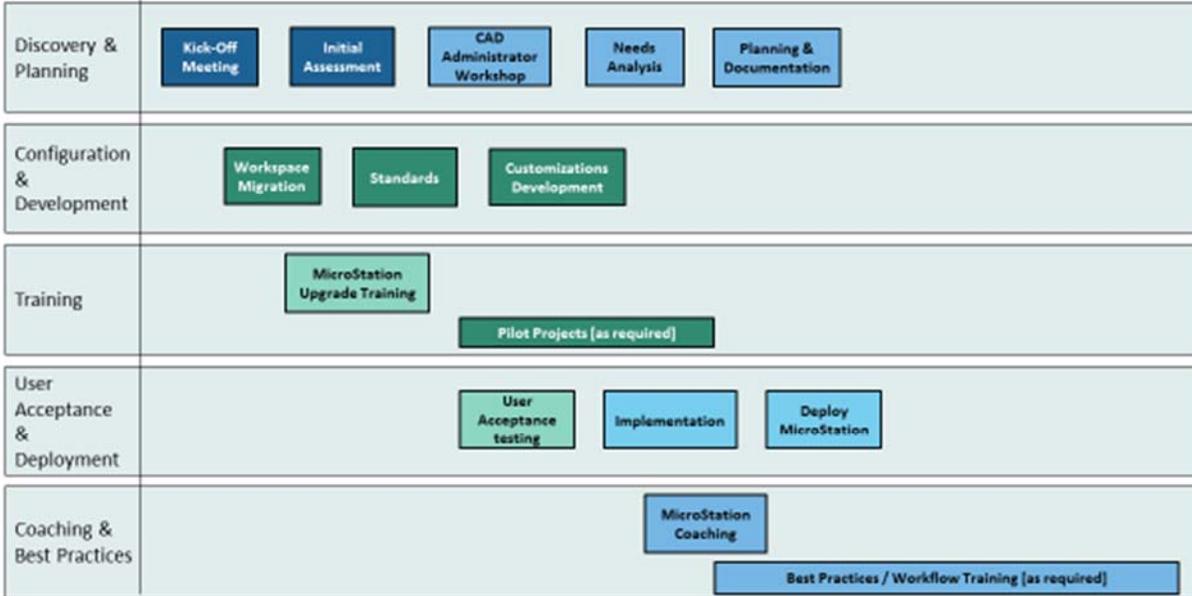
No Longer Supported – the legacy MicroStation Basic programming language is not supported in MicroStation CONNECT Edition. However, the Microsoft Visual Basic for applications is fully integrated into MicroStation CONNECT Edition. UCMs will need to be rewritten or replaced with equivalent functionality/workflows.

MicroStation CONNECT Edition configurations now provide an organized set of WorkSpaces and WorkSets that incorporate Account-specific standards as well as project-specific standards for increased adherence to CAD standards and improved accessibility. The example Workspace containing a "Metrostation" Workset is delivered with MicroStation CONNECT Edition to provide an example configuration.

MIGRATION ROADMAP

The following graphic depicts a plan for migrating to MicroStation CONNECT Edition.

MicroStation CONNECT Edition Migration Plan



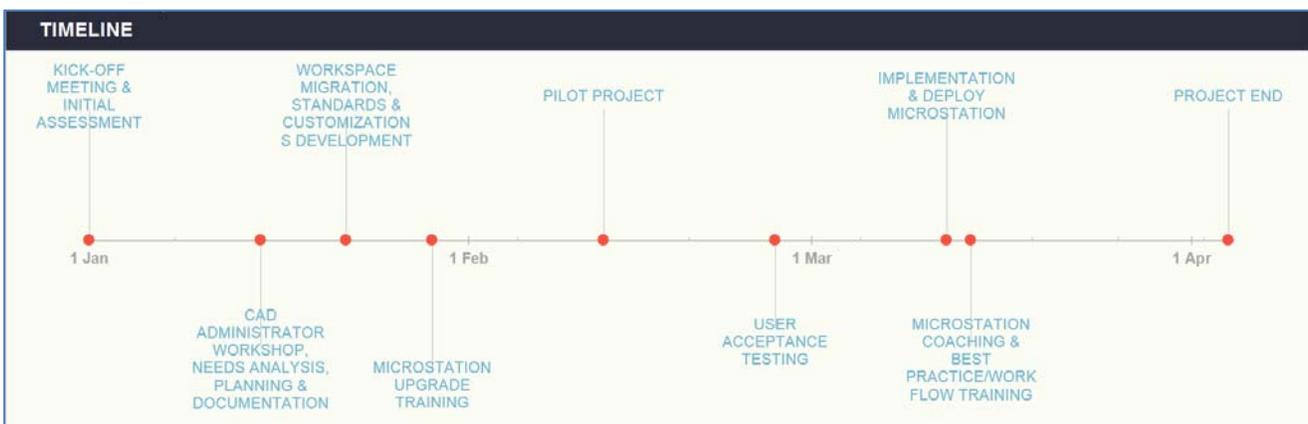
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It is important to put in place a successful migration plan that includes pre-planning, configuration, testing, best practices, and a thorough training strategy.

Completing a Pilot Project should be considered prior to full deployment. Pilot Projects provide robust testing of the new configurations on real-world projects, allow for easy adjustments to configurations and workflows prior to full production and contribute to user acceptance testing.

To accompany this document is a sample timeline that reflects significant upgrade tasks to assist with the migration planning as seen below.



MIGRATION PLANNING

The following sections help facilitate migration planning in conjunction with a Bentley User Advocate.

Software Applications

MicroStation CONNECT Edition

- Become familiar with the improvements in MicroStation CONNECT Edition over your MicroStation version to better understand where current workflows have been superseded by new technology:
 - Instructor-led, Live training
 - Virtual classroom on LEARNserver
 - Scheduled in Bentley classroom
 - Onsite
 - Self-study training [OnDemand] on Bentley's LEARNserver
 - Webinars
 - Online Help
 - Bentley Communities
 - **Helpful links:**
 - Click [here](#) for currently scheduled Live, virtual training classes and webinars
 - Click [here](#) for Instructor-led, Live training courses and Self-study (OnDemand) training
 - Click [here](#) for Bentley Communities

Other Software

- Verify Bentley vertical applications in use are available for CONNECT Edition
- Verify any document management system in use is compatible with CONNECT Edition products
- Verify any 3rd party applications in use with MicroStation will interface with CONNECT Edition

Operating Environment

- Ensure Operating System in use is version compatible with MicroStation CONNECT Edition
- Ensure any virtualized environment in use is version compatible with MicroStation CONNECT Edition
- Ensure hardware in use meets MicroStation CONNECT Edition minimum requirements

Review Workflows & Customizations

It is necessary to examine customizations and workflows to determine which ones have been superseded by new technology and can be safely abandoned/replaced and which ones need to be brought forward or modified.

Resource Items and Standards

- Decide which resource items, standards and DGNLIB items should be migrated to CONNECT Edition (i.e. Custom menus, Level Definitions, Text Styles, Display Styles, Dimension Styles, Print Styles, Custom Line Styles, Tag Sets, Element Templates, Seed Files, Rendering Settings, Pen Tables, Plot Drivers, etc.)
- Identify any use of metadata (tags, “xdata”, “user data”, etc.)
- Be sure to review items such as Working units, Angular units, Geographic Coordinate Systems, Use of Sheet Models, etc.

User Interface

Review Screen Menus, Tablet Menus, Customized Menus and Tasks. Decide if they need to be retained and move those items to updated UI components.

Legacy Data

Determine migration plan for legacy data (i.e. legacy data will not be migrated, migrated only as required, referenced and copied as needed etc.)

Licensing

Review licensing model and verify internet needs based on licensing requirements.

Timeline

Migration timelines can vary depending on size and complexity.

MIGRATION TOOLS

Configuration Migration Wizard

Get up-and-running on CONNECT Edition faster. Utilize the Configuration Migration Wizard for your V8i Workspace. Simply use the Wizard to point CONNECT Edition to your existing V8i Workspace. This can be used in mixed environments as well (i.e. Users on both V8i and CONNECT Edition). This Wizard walks you through step-by-step.*

- Available directly from Workspace pulldown menu
- Utilize existing V8i Workspace Configurations
- Ability to remap a MicroStation V8i Workspace to a MicroStation CONNECT Edition Configuration
- Helps transition existing V8i Workspaces to MicroStation CONNECT Edition Configurations (Workspaces and Worksets)

**You still need to manually migrate your MDL applications and user interface customizations (i.e. custom menus and toolbars).*

Advanced Ribbon

MicroStation CONNECT Edition is delivered with a ribbon customization called the Advanced Ribbon. This will allow existing users of MicroStation to more easily find common commands.



To invoke the Advanced Ribbon, go to the following folder:

C:\Program Files\Bentley\MicroStation CONNECT Edition\MicroStation\config\system\baseribbon.cfg

Open baseribbon.cfg in a text editor. Find the following section and follow the instructions. [Which is to remove the # symbol from the line: #MS_RIBBONRSLIST < \$(MSDIR)Ribbon\Advanced\MstnAdvanced.rsc.]

To use the Advanced Drawing and Modeling Home Tabs uncomment the # following definition.

#-----

#MS_RIBBONRSLIST < \$(MSDIR)Ribbon\Advanced\MstnAdvanced.rsc

SERVICES AVAILABLE

Bentley's Professional Services team offers a wide variety of services to assist users in their migration process. Bentley can execute the entire MicroStation CONNECT Edition upgrade service or provide assistance with targeted areas. From workflow analysis to workspace migration and configurations, from fundamentals training to advanced project coaching, the Services team is ready to help. Contact your Bentley Account Manager for additional information and to assist in structuring the right program for your organization.

MicroStation CONNECT Edition Upgrade - Complete

Partner with Bentley's Professional Services team to upgrade to CONNECT Edition. Bentley will coordinate and work to provide a successful implementation from discovery to go live. A Bentley consultant(s) will:

- Review Software Applications and make recommendations
- Review Operating Environment and make recommendations
- Review, develop and plan/implement Workflows & Customizations
- Review, develop and implement Resource Items and Standards
- Review and configure User Interface
- Create Legacy Data migration plan
- Review Licensing model
- Establish timeline
- Deliver Training

Other MicroStation Services Offerings

Bentley's Professional Services team can provide alternative, smaller services packages.

Custom Upgrade Services

Bentley offers many services to assist users in migrating to CONNECT Edition that don't include the complete upgrade. Bentley Services range from providing general overview and direction, implementation planning to development and deployment. If you don't see what you are looking for, please contact your Account Manager and Bentley will scope a proposal for you.

Workflow Analysis Package

Engage with the Bentley Professional Services team for an onsite workflow analysis. A Bentley consultant will:

- Analyze your MicroStation workflows and structures from both an administrative and user production perspective
- Discover opportunities to improve productivity
- Investigate current processes and recommend improvements
- Reduce workarounds and tedious manual interactions
- Increase knowledge and skills
- Provide suggestions for sustainability

CAD Administration Workshop Package

Bentley offers services to assist users in migrating their workspaces forward. A Bentley consultant will:

- Review MicroStation requirements
- Review and assess configuration and workflow setup
- Identify, update, and recommend CAD standards
- Deliver CAD Administration Training
- Work on-site to provide guidance in the first steps of configuring and managing MicroStation and its Workspaces
- Provide onsite support, best practice direction, and over the shoulder coaching for the project team

CAD Administrator/SME Training

Along with any migration services, Bentley strongly recommends some initial training for the CAD Support team and Subject Matter Experts (SMEs) that are involved with the migration. The early overviews and training help the user migration team to understand the inner workings of the product and allow them to make better decisions on how their system is to be configured.

The overviews and training may be a variety of formats, based on the user knowledge and experience. Some material may be covered onsite and some may be done through virtual classroom training.

End User Training

The Bentley Professional Services team offers a variety of training options for MicroStation users, either live, virtual or at the users' site, and/or self-study (OnDemand). Current courseware is developed in a modular format ranging in length from one (1) hour to three (3) hours. This modularity allows the Services team to easily identify a series of training courses targeted for a user's specific needs.

For larger deployments, a training plan is developed to address all of the users in the various departments. Based on the number of users in each department, and the maximum number of users per class, the number of training sessions is determined.

Custom Training

The Bentley Services team recommends training all users with the standard courseware that Bentley creates and maintains. This teaches the users how the software works, what commands to use, and what the applicable options do in an environment that is known and will ensure user success. In conjunction with the standard training, a 'custom workflow' can be included that will walk the users through their normal workflow within their environment using their data and standards. A 'custom workflow' is essentially a hands-on exercise for the students and does not contain any of the instruction on how to use a command, only steps on how to achieve the specified design objective.

The Bentley Services team generally does not recommend developing custom training materials for a user that reflects their data and workflows. The primary reasons for not creating custom courseware are the cost and time requirements of the initial development, and the cost and time required to maintain and update the materials as the software changes with new options and functionality.

Project Coaching

Project coaching is a service where the Bentley consultant will provide hands-on or over-the-shoulder coaching to users on their active projects. Applying concepts learned in the classroom to active design projects often raises additional questions, as no two design projects are ever the same. Having the Bentley consultant available to ask questions specific to a project is very valuable to the continued learning and application of the software.

Project coaching can be considered to accompany training offerings for a half-day or a full day. During this additional time the users work in the product with their own project data to reinforce their learning.

Recurring Services Package

The goal of the Recurring Services Plan is to focus on important ongoing maintenance, updates, and enhancements required to keep the Bentley solutions in line with your evolving business. This proactive plan is structured to allow the optimal amount of time to be purchased based on anticipated needs for the upcoming year.

APPENDIX A – HELPFUL LINKS

- Currently scheduled Live, virtual training classes and webinars:
<http://pages.info.bentley.com/learning/?Filter=Live&Prod=MicroStation>
- Instructor-led, Live training courses and Self-study (OnDemand) training:
<http://learn.bentley.com/app/Public>
- Bentley Communities:
<http://communities.bentley.com>
- Contact Us (Bentley Offices):
<https://www.bentley.com/en/about-us/contact-us>
- Sales Contact Request form:
<https://www.bentley.com/en/about-us/contact-us/sales-contact-request>