

Roadway Design's CADD Installation / Setup

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ROADWAY DESIGN'S INSTALLATION AND SETUP

Introduction

This chapter will discuss the requirements needed to install and setup the Microstation CADD files prepared by MDOT's Roadway Design Division (RWD). These standard CADD files are to be used in conjunction with Microstation to design all MDOT highway projects for Roadway Design Division. CADD files include all the things needed to design your project with RWD standards. This includes files such as menus, cells, levels, line styles, fonts, etc.

To use RWD CADD data files properly they must be installed on your workstation as instructed. These folder locations include a central folder structure for the CADD files and also specialized Microstation workspace files.

Prerequisites

Our standard CADD files have been developed to work with the following:

SOFTWARE

Windows 7 Professional (Limited functionality may occur under other operating systems.)

PowerGeopak V8i (Select Series 3) (version ???)

- OR -

Bentley Microstation Version V8i Select Series 3 (08.11.???)

Bentley Civil V8i - Geopak Suite (Select Series 3)

Microstation / Geopak should be installed before the RWDDATA set. If the software is installed in a fashion that is not recommended then it may result in limited functionality of the RWDDATA custom programs. If there are any specialized installation instructions, they will be shown in the latest update information. Please read the update information before installation of any updated software.

HARDWARE

Microstation is closely tied to the operating and video card performance on your system. Roadway Design does not endorse any particular video card manufacturer. We test under the video cards that are delivered under our current equipment contract. If CADD Support is contacted, we will give information regarding the video cards that are being used by our division. We recommend a video card that is at or above the hardware requirements defined by Bentley and that you keep the video drivers updated. Obviously, the more memory the video card has the better Microstation should perform, but this does not guarantee that you will not encounter some hardware difficulties.

If you have any doubts about the specific hardware you are using then we suggest you contact Bentley directly.

Installation of Roadway Design CADD files

RWD CADD Data files should be obtained from or FTP site. FTP instructions can be found in Chapter 1 of this CADD Manual. Installation for RWD divisional users is provided by RWD CADD support. Others are provided a dataset and setup program that should be ran to help insure that all files are installed properly.

The CADD files, once installed, should be located under a standard folder name RWDDATA. From this point forward, this folder (RWDDATA) will be known as the RWD Dataset. There is no reason to name this folder anything other than RWDDATA, for support purposes please refrain from renaming this folder.

Workspaces

Workspace files are needed to configure Microstation to run the RWDDATA menu system. A workspace is made up of multiple files; the project configuration files (.pcf), a user configuration file (.ucf), the interface files (.dgnlib), and preference files (.upf, .xml, etc.). Our RWDDATA folder includes a Microstation workspace that is designed to work with the recommended Microstation software version listed at the beginning of this chapter.

Configuration Files

Project Level Configuration files (.pcf) are delivered with the data set and are needed to instruct Microstation on where and how to use the RWDDATA CADD files. These project configuration files are located in the Project Workspace folder in the RWDDATA workspace.

User Level Configuration files (.ucf) are only delivered to tie the name of the preferences to our workspace. The RWD.ucf files do not contain any required environment variables, but it does allow users to add or override variables of their choice. To keep the association of the configuration files and the preference files we recommend that any modifications to the user workspace file be done in the rwd.ucf file. Support of modified user configuration files are the responsibility of the user and not Roadway Design.

The current standard workspace configuration folders are (assuming installed on the C drive):

c:\rwddata\Workspace\Projects - the location of the rwddata pcf files

c:\rwddata\Workspace\Users - the location of the rwd .ucf file

Configuration files are actually ASCII files that end with a (.pcf or .ucf) extension. They contain environment variables that instruct Microstation on where the standard CADD files are located. Default copies of RWDDATA standard configuration files are located in the "...\\rwddata\\setup\\templates" directory.

The standard workspace files are:

RWD_{East}.pcf - project level workspace for English projects located in the State Plane East

Zone.

RWDwest.pcf - project level workspace for English projects located in the State Plane West Zone.

RWDm.pcf - project level workspace for metric projects.

RWD.ucf - user level workspace for all projects (this file can be edited by the user)

Notes: The two English project workspaces are used to insure that users create design files with the proper state plane coordinate zone headers in the seed file. No new metric projects will be created, so zones are not required in the seed files.

Interfaces

In addition to workspaces, custom RWDDATA Interface files are also provided. These dgn library files are used to customize the appearance of Microstation by allowing us to add tools to the graphical interface. The custom tools are located in design file library files that end with a (.dgnlib) extension . These files are located in our custom workspace interface folder structure.

The current custom interface folder location is (assuming installed on the C drive):

c:\rwddata\Workspace\Interfaces\rwddata\Rwd\ : English Interface files

c:\rwddata\Workspace\Interfaces\rwddata\RwdM\ : Metric Interface files

Preferences

Microstation preference files hold settings information inside of Microstation. Here is a list of just some of the things that are saved in the preference files.

1. The location of all Microstation dialogs (docked and undocked).
2. The dialog entries. Such as; distances, angles, and check boxes.
3. The look and feel of layout and size of icons.
4. Mouse wheel behavior and button command assignments.
5. Number of Screens open.
6. Default attachment behavior of raster and dgn references.
7. Task Navigation presentation mode and Icon size.
8. Text Editor Style and View Option defaults.

Roadway Design has modified the preferences to function in a style that we prefer to be used on our projects. This style is based on both historical and default preferences and hardware configurations. The default preference file folder location is controlled by our project configuration file. The preference files control which custom menus are loaded and how they

are docked. WE HIGHLY RECOMMEND that you keep these preferences set as closely to those that are delivered, but we understand that you may prefer to change them at times. Please understand that we do not and cannot support your personal customizations.

The primary preference file has the file extension of .upf. This file contains traditional preference settings. The name of this preference file matches the name of the "user" workspace configuration file. Therefore, this is the reason we have a user level configuration (rwd.ucf) file.

The current standard preference folder location is (assuming installed on the C drive):

c:\rwd\data\Workspace\prefs\ (... when installed on your local computer)

-or-

c:\rwd_prefs\ (... when installed on networked installation)

In addition to the .ucf file, Microstation now saves data in .xml preference files. These files hold information on dialog settings, dialog docking locations, etc. The files are also located in the pref folder. The names of the xml files are dependent on the names of the workspace configuration and interface files. Below is an explanation of the files:

<User_Workspace_Name>.<Project_Workspace_name>.GroupPanels.xml

Is used to store the state of group panels. Which include; 1) If they are expanded or collapsed, 2) The specific data in the group panels. Examples of group panels are the Element Info, Customize, View Attributes, and probably others.

<User_Workspace_Name>.<Project_Workspace_Name>.<Interface Name>.TaskNavigation.xml

Is used to store the state of the task navigation dialogs when they are open. Some data that is stored in this file are the active task dialog path, the root task path, and the active task path.

<User_Workspace_Name>.docking.xml

Is used to store information about the screen location of dockable dialogs, which includes the dialog location, size, and position.

A demo video is available that shows how Roadway Design preferences are delivered, how to make personal changes, and how to save them. [Click Here to View our Preference Video.](#)

Making the RWD Menu System Available to Microstation

To make the RWDDATA workspace files available to Microstation an application configuration files (rwddata.cfg) is setup and delivered to the Microstation ...config\appl\ folder.

This file rwddata.cfg contains environment variables that points Microstation to the RWDDATA folder as a workspace folder.

We supply a SETUP executable file to create and install the rwddata.cfg file. The setup program locates where Microstation/Geopak is installed by reading a registry value (If the required version of Microstation is not found the user will have to manually select the folder where Microstation executable is installed). It uses this information to install the rwddata.cfg file.

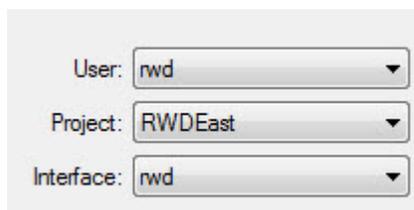
The setup executable is located in the following directory (assuming install was on the C drive):

c:\rwddata\Setup\Setup.exe

If you don't have RWDDATA installed in the default C drive. The setup will prompt the users to locate where they have installed the RWDDATA folder. If this location is a networked drive the user will also be prompted to create and/or select a folder to hold the preferences on the local computer (this will default to the folder c:\rwd_prefs).

Selecting the Workspace with Microstation

To use the correct workspace you must determine the zone in which your project is located. The chapter on SEED files has details on how the zone is selected. Once you know the zone you can either select the workspaces in the MICROSTATION MANAGER dialog...



The image shows a dialog box with three dropdown menus. The first menu is labeled 'User:' and has 'rwd' selected. The second menu is labeled 'Project:' and has 'RWDEast' selected. The third menu is labeled 'Interface:' and has 'rwd' selected. Each menu has a small downward-pointing arrow on the right side.

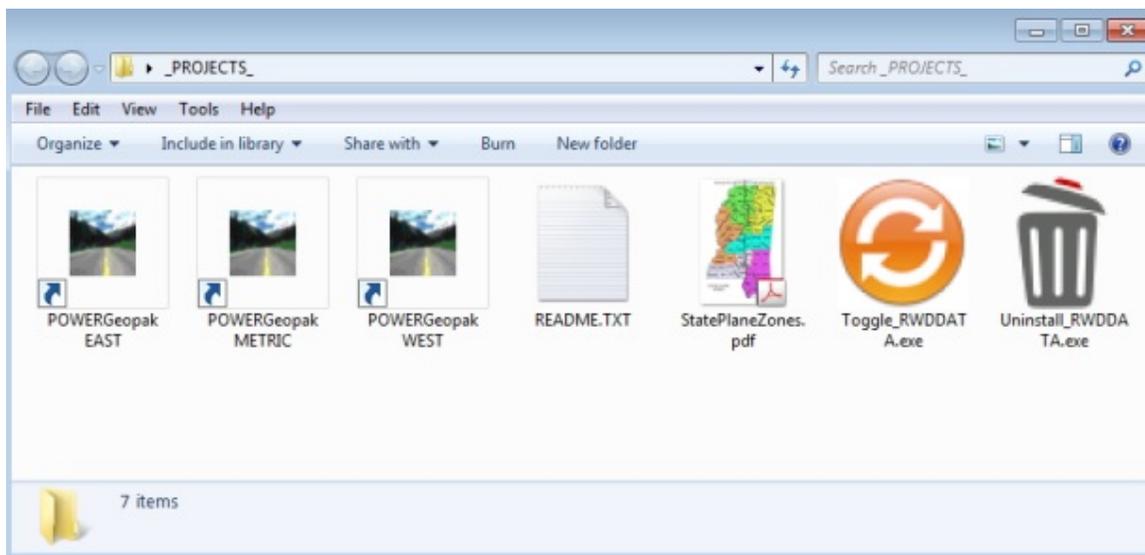
or use the _Projects_ folders Icons, which will automatically start Microstation using RWD workspaces.

Project Shortcuts

If you want to insure that you are starting Microstation with the correct workspace for a specific project you can use a set of ICON SHORTCUTS delivered on your desktop.

This folder contains configured icon shortcuts that start Microstation with the proper workspace configurations set.

This Project folder may look similar to this:



ICON USAGE:

POWERGeopak Icons will start Microstation/Geopak with a selected RWD workspace (east, west, metric).

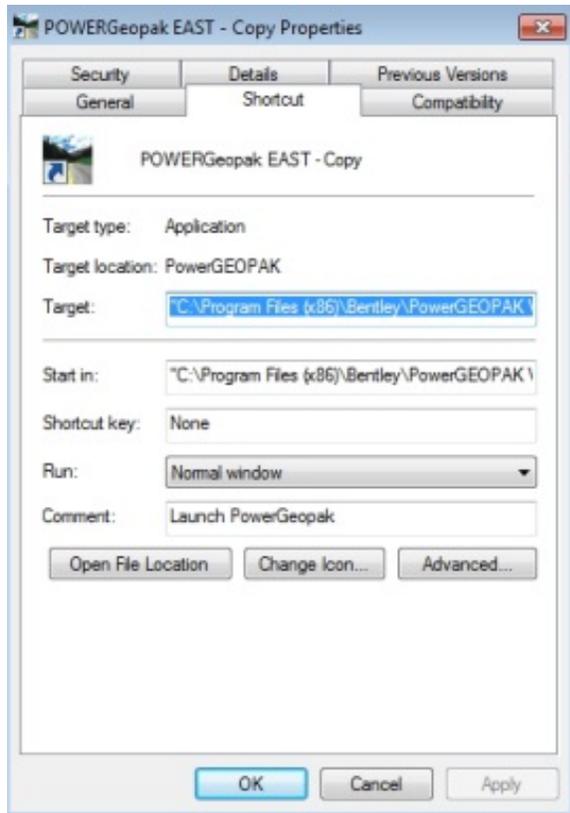
Readme.txt icon contains information regarding the usage of all the icons in the folder.

If you want to add custom icons:

It's a good idea to keep a template version of all the icons, so that you can copy and create a new icon for each new project you work on. This will help you work on multiple projects, without having to constantly remember the appropriate coordinate zone to use.

Copy the appropriate icon and rename it. Right-Click on the icon and select RENAME. Obviously you should name it based on your project it will be associated with.

Right-Click on the copied icons and select "properties". It will look similar to the following:



Target

The TARGET indicates which program to run. This icons runs the executable to start Microstation. You can add a "option" to the end of this target to make it automatically start Microstation using a specific project workspace. This option is called (-wp), which is a key-word that lets you specify a workspace name. The syntax of this is :

`-wp<workspace_name_without_extension>`

Note that there are no spaces in this option... Example: (-wprwdeast) would tell Microstation to start using the workspace filename rwdeast.pcf.

Note the double quotes around the full path name to the executable. This is required because of the spaces in the name. A space is also required after the last quote which is before the -wp option.

-wurwd is the user level workspace name. This should be included to get Microstation to load up the proper interface files.

If using Geopak Suite Only...

-waLoad_Geopak_SS2=1 is a method of setting an environment variable. This one tells Microstation that you want to start up with Geopak Active.

Start In

The START IN field is normally used to indicate to the running program what is the name of the "working" folder. The working folder is where your project design files are located.

You can enter the full path name of the folder in which your project files are located. An example would be:

D:\Projects\100888-301-98

Remember, if the path has a space, it must be enclosed in double-quotes.

Microstation License Management

MDOT USER ONLY

The following are instructions regarding how to obtain a license to run Microstation at MDOT. The license information shown below will only work for MDOT. Consultants must contact Bentley to obtain their licenses. MDOT currently has an Enterprise license, so it not only works for Microstation, but for other Bentley products as well. For example, if you have activated license for Microstation, then when your installed versions of Geopak, Iplot, etc., should work as well. You will not have to install additional licenses for those products.

The process for obtaining a Microstation license is obtained from a Select Server by running a License Tool application.

RWD CADD Support will run the License Tool application for its Division when installing Microstation and will activate the licenses. District users and others will have to activate their own licenses. The following information shows how to run this tool.

When you install Microstation for the first time, the install process will ask you if you want to use the product activation. If you run the tool a dialog will appear or if you decide to run it later you can find the application inside Microstation under UTILITIES > LICENSE MANAGEMENT.

To apply a license use the dialog tool, TOOLS > PRODUCT ACTIVATION WIZARD

There are two pieces of information that you will need to know. The MDOT select server name and activation key. They are listed below:

Server Name: BENTLEY

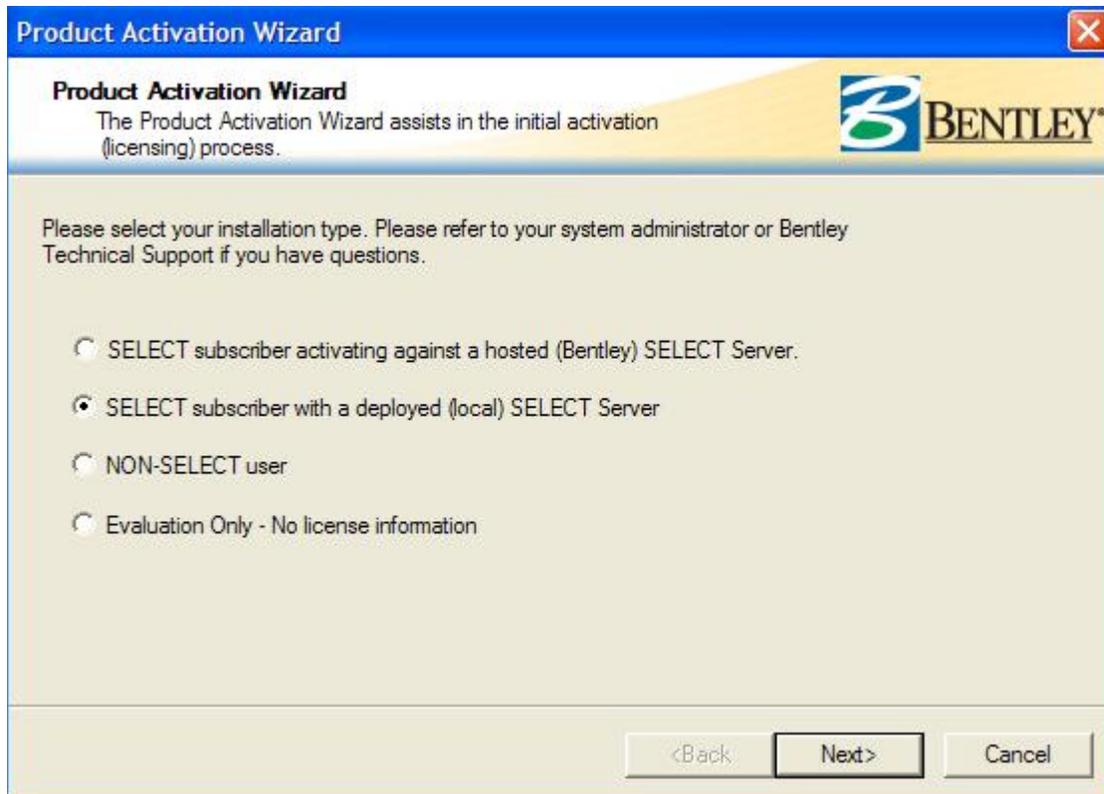
Site Activation Key: D2D8555D623AB746942DC6C63A357B74

The information above is located in a text file (...\\rwddata\\apps\\BentleyLicense.txt). This file can be used for copying the data onto dialogs. If the server name changes or the site key changes then this text file should contain the latest information.

Manual MDOT license activation:

In the “Product Activation Wizard” dialog. You will need to select the following option:

(x) SELECT subscriber with a deployed (local) SELECT Server.



On the next dialog, you enter the SERVER NAME and ACTIVATION KEY and then NEXT to proceed.

Product Activation Wizard

Activating against a SELECTserver
Please enter your SELECTserver information.



If you are activating against a local SELECTserver, you are required to provide the server name and site activation key. If you are activating against Bentley's SELECTserver, your server name is provided.

Server Name

Site Activation Key

Use HTTPS (SSL)

Settings stored for: All Users of this Machine

Enter your Country Name

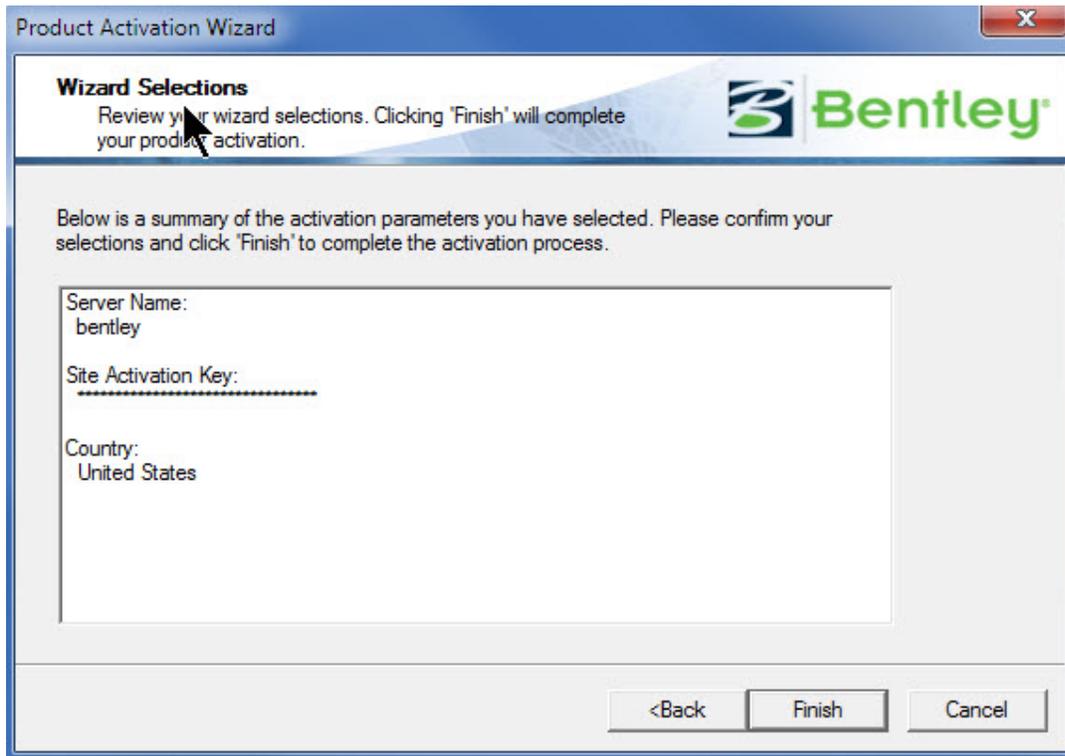
Product Activation Wizard

Country of Use
The country where this product will be used.



Please select the country where you will use this product from the list below.

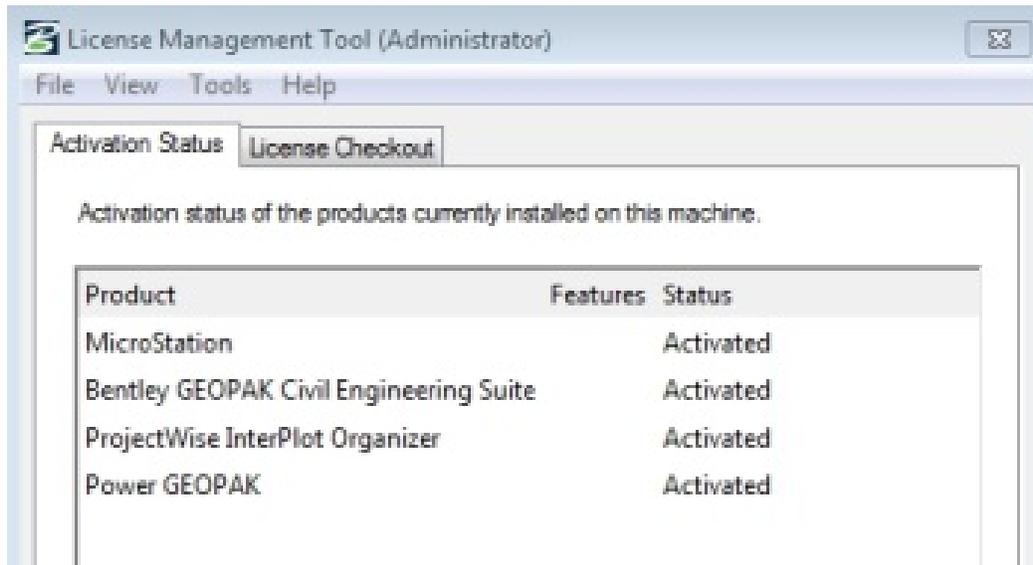
You then can Review you Entry, click the FINISH button.



You should see a successful complete statement at the end.

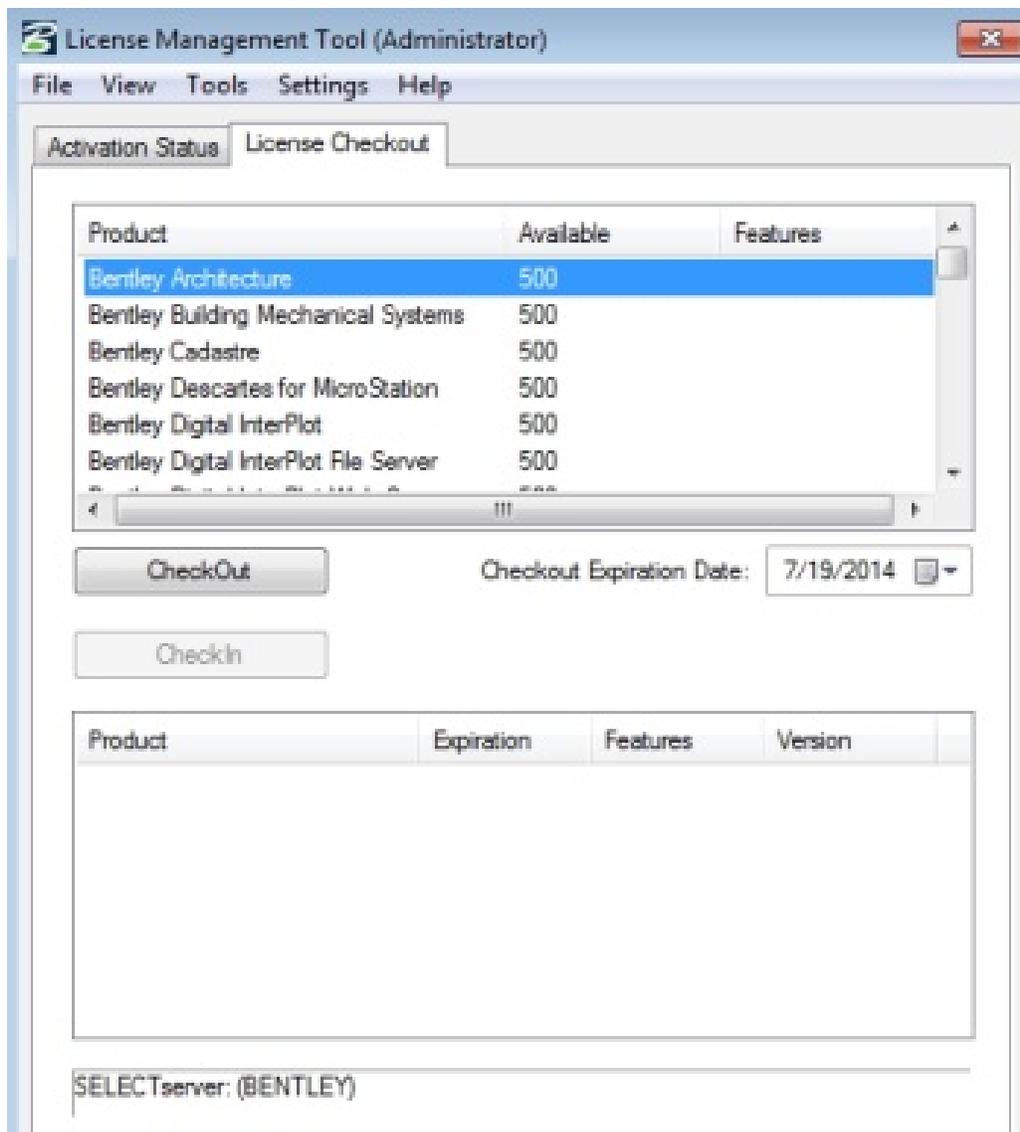
On the “Activation Status” dialog tab, you should see you product activated. In addition to this you can use the “License Checkout” tab if you need to check out a license. The purpose of checking out a license is to allow you to use Microstation when not connected to the MDOT network.

Here is an example of the Activation Status tab:



This dialog shows the current status of the products that you have activated licenses.

Here is an example of the License Checkout tab:



Summary

To summarize this chapter you need to do the following:

1. Set up your system based on the prerequisites. Operation System and version of Microstation.
2. Install the RWDDATA CADD files to a RWDDATA folder. Use the ZIP file from our FTP site or from your CADD contact. FTP instructions can be found in Chapter 1, CADD Manual Overview.
3. Insure that the SETUP program has been run (...\\rwddata\\setup\\setup.exe.)
(IMPORTANT: Setup must be run by a user with Administrator rights on the computer.)

4. Setup the Licenses for the Microstation and other products.
5. Use the desktop **_Projects_** folder icon shortcuts to ensure proper start-up of Microstation. With specialized icons, shortcuts created for each project that are associated with a specific workspace and working folder assigned. You can be assured that you always enter the Microstation Environment using the correct RWD standards and settings.

DO NOT enter a design file from Window Explorer. Doing so will enter you into a design file without giving you the chance to select a workspace. When this is done, the last untitled workspace is used.

DO NOT switch to another project while in Microstation, because this does not switch workspaces and may cause you to use incorrect data files.