## *MaineDOT's MicroStation/InRoads V8i SS2 Configuration Overview*

Our users have the flexibility to create project data that either resides locally on their workstation, or remotely on a network file server. Regardless of where the project data will reside, two folders are installed on each workstation:

!msv8iconf Folder (at MaineDOT this is installed on each workstation as C:\!msv8iconf)
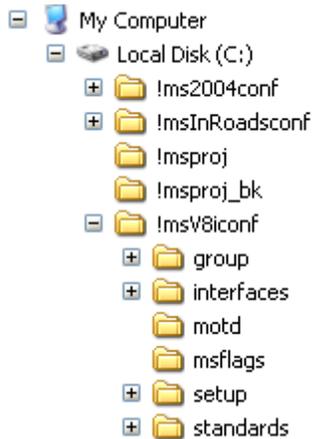
This folder contains all of our InRoads and MicroStation custom files as downloaded from our web site. In the image above, you can also see other microstation configuration folders. These are for older versions of MicroStation the Department still uses on various projects.

!msv8iuser Folder (at MaineDOT this is installed on each workstation as C:\!msv8iuser)
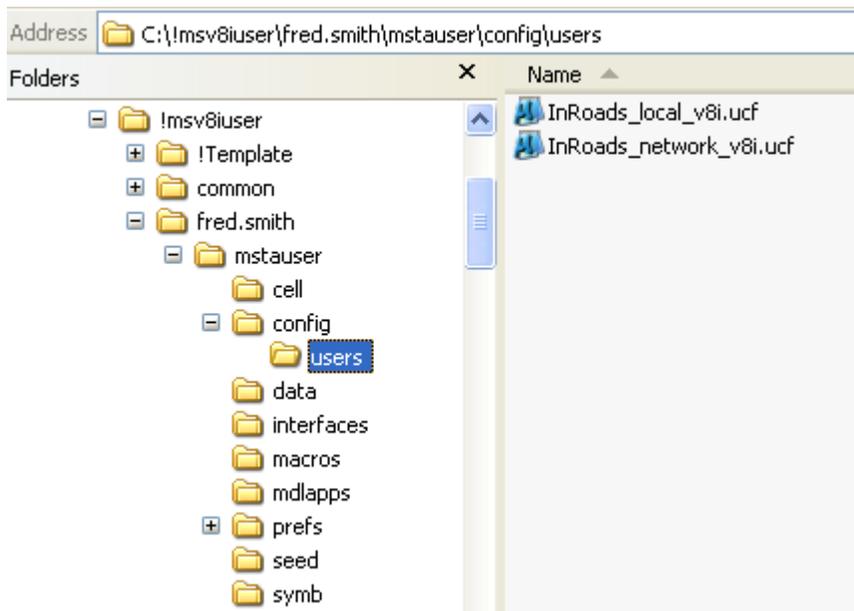
This folder contains our custom user configuration files. In the image above, a user whose windows login is "fred.smith" is shown. It has been expanded to show the various UCF files available. They would choose InRoads_local_v8i.ucf when working on local data….and InRoads_network_v8i.ucf when working on server project data.

Please note this is a different folder than earlier installations of MDOT's user configuration which was in !msv8user, not !msv8iuser. We had issues with saved User Preference Files

(.upf) when both v8.9 and v8.11 used the same user configuration files, or even separate
UCFs were in the same folder structure, so we decided to separate them.

The main difference between the two files is the following line:

```
#------ Set up disk variables to match user's mapping -------#
PROJDISK1 = Y:
```

The InRoads_local_v8i user configuration file sets this PROJDISK1 variable to C or D drive.
More detail on how our project folder structure is set up will be explained later in this
document.

```
_USTN_PROJECTSROOT  = //oit-teaqasdtiis.mdot.w2k.state.me.us/PCPIN1/msworksp/!msproj/
%else
```

This variable is defining the location for a network shared list of project configuration files at
a specified location *You can set the _USTN_PROJECTSROOT variable to wherever you're storing
your project PCF files at your office.* For example:

_USTN_PROJECTSROOT = c:/MDOT Projects/   (or whatever you decide to use)

```
#-------------- Assign user's work group --------------------#
#-- Valid Groups are BRIDGE,BRMAINT,CONST,ENVIRON,GEOTECH, --#
#-- HEARING,HIGHWAY,ROW,SURVEY,TRAFFIC,UTILITIES ------------#
#   Just un-comment the Group you want to use    #

WKGROUP          = HIGHWAY
#WKGROUP          = BRIDGE
#WKGROUP          = BRMAINT
#WKGROUP          = CONST
#WKGROUP          = ENVIRON
#WKGROUP          = GEOTECH
#WKGROUP          = HEARING
#WKGROUP          = ROW
#WKGROUP          = SURVEY
#WKGROUP          = TRAFFIC
#WKGROUP          = UTILITIES

#-------------- Assign user's Menu Availability --------------------#
#-- Valid Groups are BRIDGE,BRMAINT,CONST,ENVIRON,GEOTECH, --#
#-- HEARING,HIGHWAY,ROW,SURVEY,TRAFFIC,UTILITIES ------------#
#   Just un-comment the Menus you want to see    #

HIGHWAY                =Menu On
#BRIDGE                 =Menu On
#BRMAINT                =Menu On
#CONST                  =Menu On
#ENVIRON                =Menu On
#GEOTECH                =Menu On
#HEARING                =Menu On
#ROW                    =Menu On
#SURVEY                 =Menu On
#TRAFFIC                =Menu On
#UTILITIES              =Menu On
```

These two variables assign the user's workgroup and determine which templates and tasks
the user is presented in V8i . Work group assignment determines where users will store their
data in our project directory structure described later in this document and allows us to assign
work group customizations in our workspace.

Project Configuration Files – (PCF Files)

The Department uses project configuration files to store project specific variables used by our plotting routines and various macros to add details to sheet drawings. Our office users typically use shared versions of these files located on our network: (Y:\msworksp\!msproj\)

Users working on local copies of design files have a duplicate directory of these configuration files installed in the following location typically: (C:\!msproj\)

Project Data Files (DGN, etc.)

Our users generally work on files that are stored on a network file storage area mapped for them as:
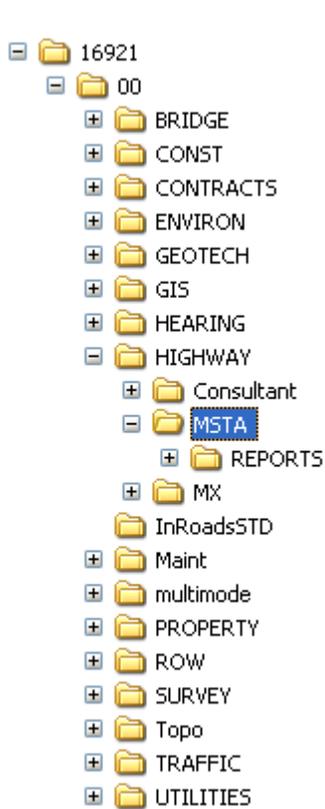
Y:\PIN\

This folder is further broken down by project-specific folders that contain work group file storage areas:

For a project with PIN number 16921.00….the directory would be: Y:\pin\16921\00\ with subfolders for each workgroup as shown in the following illustration:

Each workgroup has a folder named "MSTA", which is where we store our MicroStation drawings and data files.

So…for a highway designer, they work in:

Y:\pin\16921\00\highway\msta\

Our directory structure done in this way allows us to use "relative referencing" for all projects and seed files.

There is also an InRoadsSTD folder where our InRoads files are stored.

For those working locally, they create their own "PIN Directory" as:

C:\pin\ or D:\pin\

Adapting Maine DOT's MicroStation customizations to work at your office:

You need to determine the answers to a few basic questions before you begin editing the configuration files you've downloaded from the Department's web site:

- Where do I want to store my MicroStation Drawings/InRoads Data?
- Where do I want to store my Project Configuration files?
- Where do I want to store MaineDOT's Customizations (i.e workspace)?
- Where do I want to store my User Configuration files?

If you have implemented earlier versions of the Department's custom workspace and configuration, you should find our V8i SS2 much the same with a few notable exceptions. We have attempted to simplify our customization of MicroStation V8i and further isolate it from the standard Bentley configuration to make switching configurations for various clients easier for our consultant community. The following section describes our new configuration files:

z_redirectMDOT.cfg

In previous versions of MicroStation, the Department has modified the core Bentley system file called mslocal. While this worked just fine for our use, it made it difficult for consultants and others who use a variety of different workspaces to switch between them. In V8i we have left the default system files intact and are using z_redirectMDOT.cfg to invoke the Maine DOT workspace.

For a windows XP Pro – 32 bit operating system and installation on the machine's "C" drive, this file should be placed in the following directory:

C:\Program Files\Bentley\MicroStation V8i (SELECTseries)\MicroStation\config\appl

For other operating systems such as Windows 7 (32 or 64 bit), this path may be slightly different:
C:\Program Files (x86)\Bentley 08.11.07.443\Program\MicroStation\config\appl

Please make note of the path where the default MicroStation configuration is installed as this will be needed as you edit the configuration files.

A variety of MicroStation variables are defined in this file that point to various directory locations and/or other files that may need to be edited based on your own installation. I'll discuss a few of these below:

```
#--------------------------------------------------------------------------------------
# Redirect File to run Maine DOT config with MicroStation V8i Select Series 2
#     Steve Rick - March, 2012
#     Bob Skehan – May 2012
#--------------------------------------------------------------------------------------
%if exist (D:/Program Files/Bentley/MicroStation V8i (SELECTseries)/MicroStation/config/mslocal.cfg)
MSDIR=D:/Program Files/Bentley/MicroStation V8i (SELECTseries)/MicroStation/
%endif


#--------------------------------------------------------------------------------------
# A C: installation will take priority over a D: installation
#--------------------------------------------------------------------------------------

%if exist (C:/Program Files/Bentley/MicroStation V8i (SELECTseries)/MicroStation/config/mslocal.cfg)
MSDIR = C:/Program Files/Bentley/MicroStation V8i (SELECTseries)/MicroStation/
%endif
```

Sets the MSDIR path variable. You will need to edit this path to suit your MicroStation installation directory.

```
#------------------------------------------------------------------------------------------
# Check for Flags - switch to local MDOT workspace if appropriate
# Active flags are now in the \!msv8iconf\ folder.
# Note that support for running from the W: drive is no longer provided.
#------------------------------------------------------------------------------------------
%if exist (d:/!msv8iconf/msflag.runlocal)
_USTN_WORKSPACEROOT           = d:/!msv8iconf/
Standards                     = d:/!msV8iconf/
%endif

%if exists (c:/!msv8iconf/msflag.runlocal)
_USTN_WORKSPACEROOT           = c:/!msv8iconf/
Standards                     = c:/!msV8iconf/
%endif
```

This section basically checks your C and D drives looking for MaineDOT's customization directory by checking for a file called msflag.runlocal. It sets variables containing the location of our custom workspace/standards directory used by other configuration files and the program itself. The flag file is simply an empty text file with a specific name.

!initialize.cfg

MaineDOT's workspace has one other configuration file that should be looked at and possibly modified for use at your office. It can be found here:

C:\!msv8iconf\standards\config\standards\!initialize.cfg

This configuration file will set a variety of additional variables specific to identifying the user, menus, and other workspace settings that make up the bulk of our customization.

```
#------------------------------------------------------------------------------------------
#Test to see if logged in user has a user folder.  If not, they are logged in as "common".
#------------------------------------------------------------------------------------------

# Temporary definition of USERPATH
USERPATH        = ${parentdevdir {_USTN_WORKSPACEROOT}}!msv8user/$(USERNAME)/mstauser/

%if !exists ($(USERPATH)CONFIG/USERS/normal.ucf)
   WIN_USERNAME   = common
%else
   WIN_USERNAME   = $(USERNAME)
%endif

_USTN_USER    = ${parentdevdir
{_USTN_WORKSPACEROOT}}!msv8user/$(WIN_USERNAME)/MSTAUSER/CONFIG/USERS/
_USTN_USERNAME = InRoads_Network_v8i
```

The Department sets up user folders as described earlier in this document. The name of these folders is set up to mimic the Windows User ID. The code shown above compares the user that is currently logged in to the available user folders. If one isn't found, it uses a user folder named "common". It then sets variables to identify where this user folder resides. The user configuration files stored in this folder were discussed at the beginning of this document. The last line shown above is the user that shows up by default in MicroStation
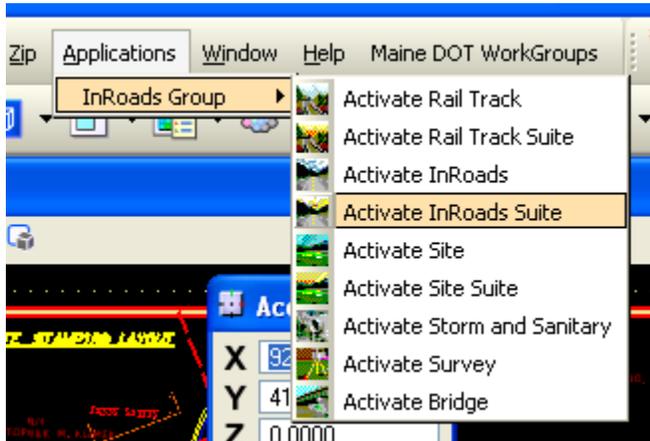

Manager when you launch MicroStation. In this case it's "InRoads_Network_v8i" and will read the InRoads_Network_v8i.ucf file.

Local InRoads Application.cfg

This file contains the following line:

```
Load_InRoads_SS2=1
```

This line of code has been added to enable access to the InRoads application from within MicroStation's Applications menu:

The Department will not be providing separate desktop shortcuts for InRoads and MicroStation in SELECT Series 2. All users will launch MicroStation from the default icon, and launch InRoads on an as-needed basis through their menu.

In order for the Applications menu item to appear as shown above, thie Local InRoads Application.cfg file must be copied to the following location for Windows XP Pro:

c:\Program Files\Bentley\MicroStation V8i (SELECTseries)\MicroStation\config\system

Other operating systems such as Windows 7 may require you to copy this to a slightly different path. The key is to place this file in your MicroStation's "config\system" folder.

Additional Steps for Maine DOT's InRoads setup

InRoads Survey
- Survey-Variables_ver8-11.reg - Registry edit file to enable the Survey Variable Manager settings for V8i
- SurveyCheckShots.xsl - Style Sheet that needs to be put in the C:\Program Files\Bentley\InRoads Group V8.11\XML Data\en\Survey folder
- CxxxxxTRA.tew, TDS.TEW, TDS.TIW, Traverse.tew, and Traverse.tiw – Survey Import and Export files that needs to be put in the C:\Program Files (x86)\Bentley\InRoads Group V8.11\data folder

All InRoads Designers
- mdot_US_V8i.xin – InRoads Preference File for V8i
- template_V8i.itl – Template Library File for V8i

- menu-addins-ver8_11.reg – Registry edit file to enable the Application Add-ins for V8i
- ProjDef_MDOT_ver8_11.reg - Registry edit file to enable the Project Defaults for V8i
- MaineDOTStationOffset.xsl – Style Sheet that needs to be put in the C:\Program Files\Bentley\InRoads Group V8.11\XML Data\en\Clearance folder

Removing Maine DOT's workspace

Disabling MaineDOT's workspace is as simple as removing or renaming our redirect file when you need to work with another client's workspace, or to run MicroStation "out of the box" as delivered by Bentley Systems.