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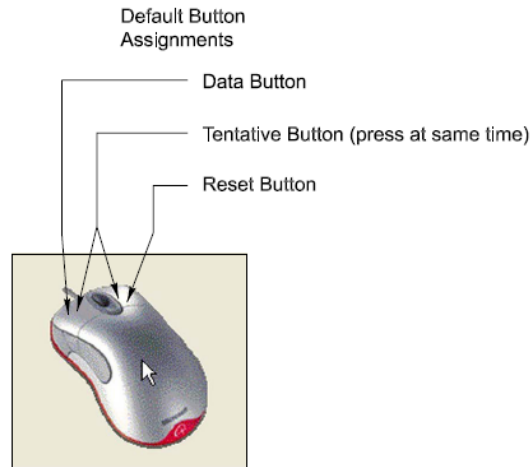
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CHAPTER 3: MICROSTATION V8i BASICS

3.1 - MicroStation Design File Settings

3.1.1 - Setting Button Assignments

By default, the mouse buttons are assigned as shown below.



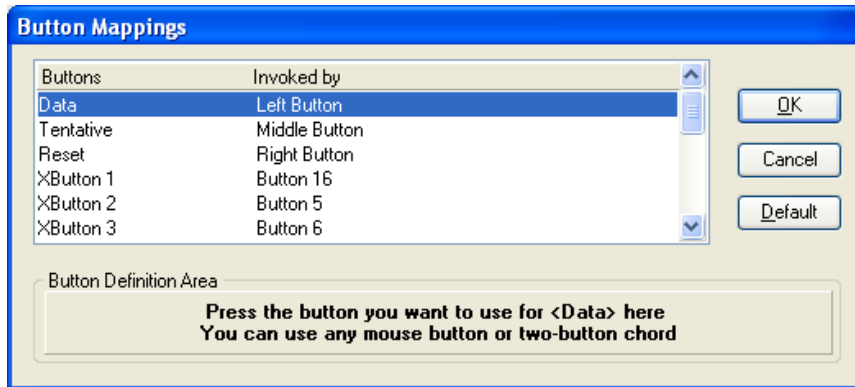
Each of the buttons can be set to something different. For instance, if you wanted to assign your mouse button as shown below follow the instruction ahead.



To set up the mouse buttons, go to **Workspace->Button Assignments.....**

In the Button Assignments dialog box under Buttons, choose **Data**. If the assignment under “Invoked by” is anything other than Left Button then move the mouse into the Button Definition Area and press the **Left** mouse button. In the Button Assignments dialog box under Buttons, choose **Tentative**. If the assignment under Invoked by is anything other than Middle Button then move the mouse into the Button Definition Area and press the **Middle** mouse button (the wheel). In the Button Assignments dialog box under Buttons, choose **Reset**. If the assignment under Invoked by is anything other than Right Button then move the mouse into the Button Definition Area and press the **Right** mouse button.

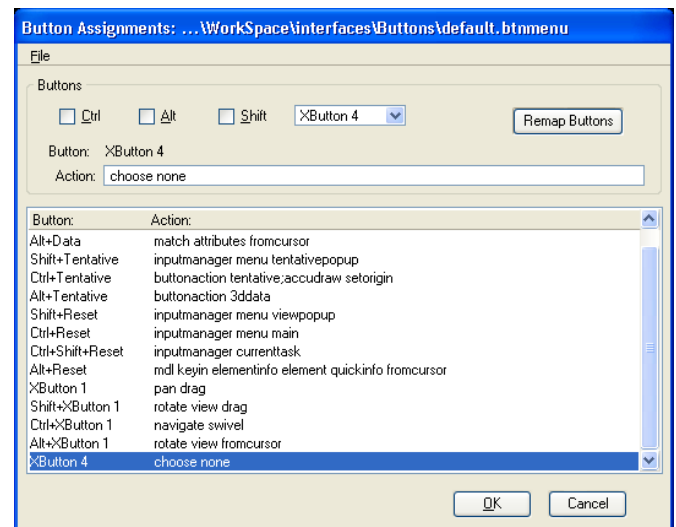
Finally, press the **OK** button.



3.1.2 - Map a Mouse Button to Clear a Selection Set

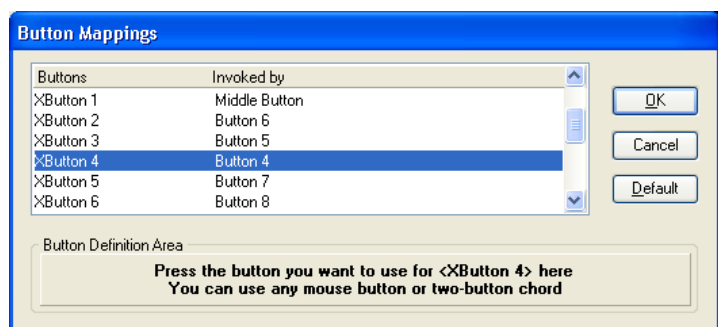
Microstation V8i uses the power selector exclusively, sometimes an element from a previous command will still be selected when the user selects a new element and performs another action. The user may not be aware that the previous element was also modified. This button assignment allows the user to hit a mouse button and automatically deselect everything before performing a new task.

- Go to **Workspace > Button Assignments**.
- Select an empty button and, under **Action**, type in “choose none” (without the quotation marks)
- Hit **Remap Buttons**.



Select the button you chose in the previous window, hover the mouse over the Button Definition Area, and click the button you wish to use for this command.

The small button on the left of a new Logitech mouse, (the one under your thumb) work well for this.



WARNING: if you choose a button already being used for something else (like the left or right mouse button), whatever function it did before will now be assigned to this new button.

You should now be able to use the extra mouse button to deselect everything. You can similarly map any other keyable command to the extra mouse buttons.

3.1.3 - Compress Design File

From the MicroStation dialog box, choose **File > Compress > Design**. This physically removes all logically deleted elements.

3.1.4 - Save Settings

From the MicroStation dialog box, choose **File > Save Settings**. This saves all the design file settings so that when the file is opened the next time, all the settings will be restored.

3.2 – Level Assignments

3.2.1 – Introduction to Levels

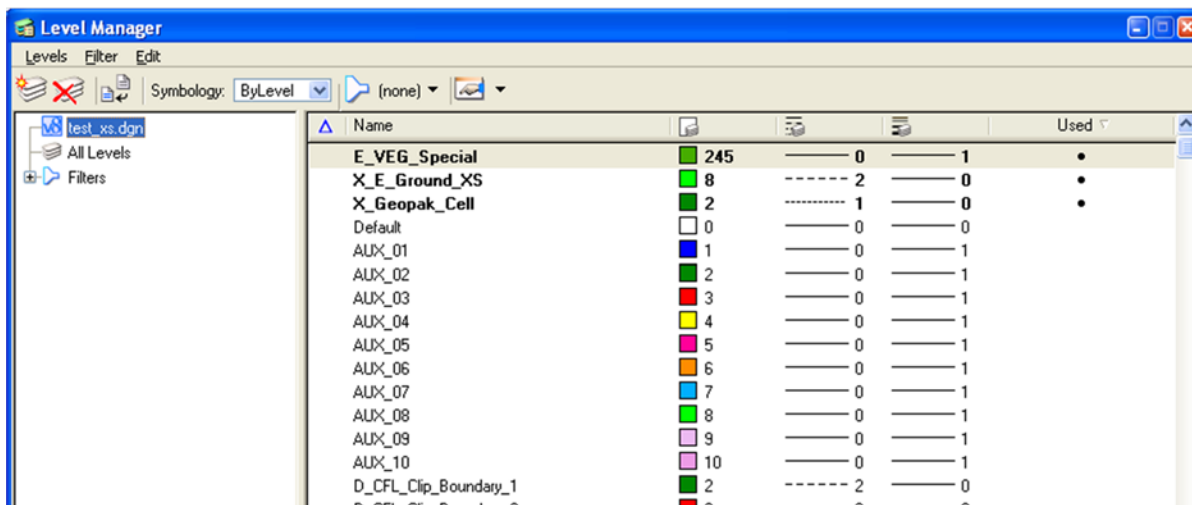
To maintain uniformity among different drawing files, it is essential that an organized leveling system be used. MicroStation V8i allows levels to be saved on a name basis instead of previous number based system. A design file may contain an unlimited number of levels on which data can be displayed. There are two primary ways in which to assign symbology to each element: first, the color, weight, and line style of the graphic elements are set independently. Second, a new addition introduced in MicroStation V8 and maintained in V8i, is **ByLevel** symbology. With ByLevel symbology each level may have a pre-assigned color, line style, and weight. By selecting the desired level, these attributes are automatically set.

- In MicroStation V8i, levels and the associated ByLevel symbology are stored in a DGN library, and may be attached to any MicroStation file. In order to maintain the X30 criteria and future versions of Geopak criteria files, the *FLH_Combined.dgnlib* is controlled FLH wide. EFLHD designers and A/E Consultants will not be able to add new levels to the *FLH_Combined.dgnlib* file.
- For EFLHD employees, the standard DGN Library is automatically attached when opening a design file using the Project Configuration (**FLH_X30_English**).



*In EFLHD, most elements should be placed with the **GEOPAK D&C Manager**, the **.ddb** file. The D&C Manager is the best way to insure that elements are placed with the proper symbology. For final output and for use at later stages with GEOPAK criteria files, and for computing quantities.*

- All levels are named and have a default color, line weight, and style.
- Level definitions are stored and managed by “**FLH_Combined.dgnlib**”
- Levels have ByLevel Symbology and Override Symbology settings.
- Users shall not create their own levels for use in any design files submitted or exchange with EFLHD. (See *list of FLH levels in EFLHD CADD Manual*)
- Levels can be managed by Level Manager and Level Display icons as shown below.
Go to **Setting > Levels > Manager**



3.3 – References

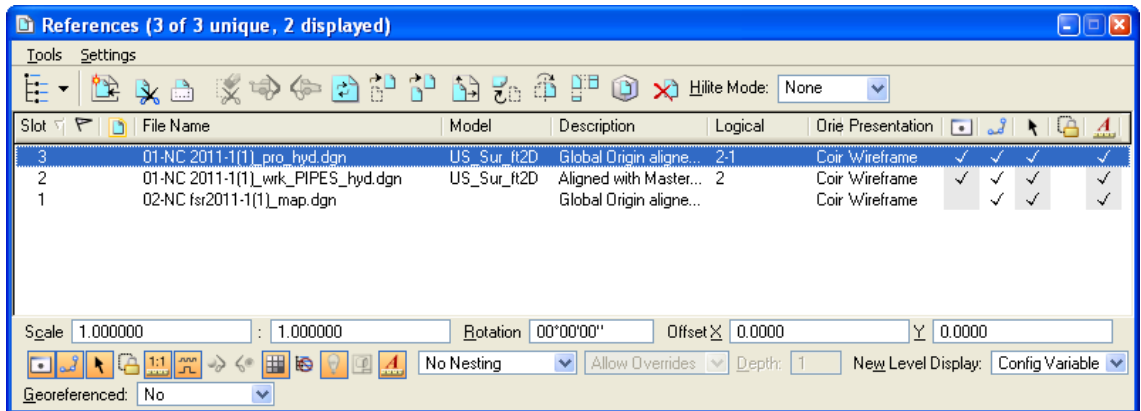
3.3.1 – Introduction to Reference Files

External design files can be attached to the current file as a reference. Reference files maintain a dynamic link with the current file, allowing changes in the attached references to be reflected in the current file. Elements in the attached file display as though they are part of the current file. References, however, are a one-way reference, in that you cannot edit attached files while you are working in your current design.

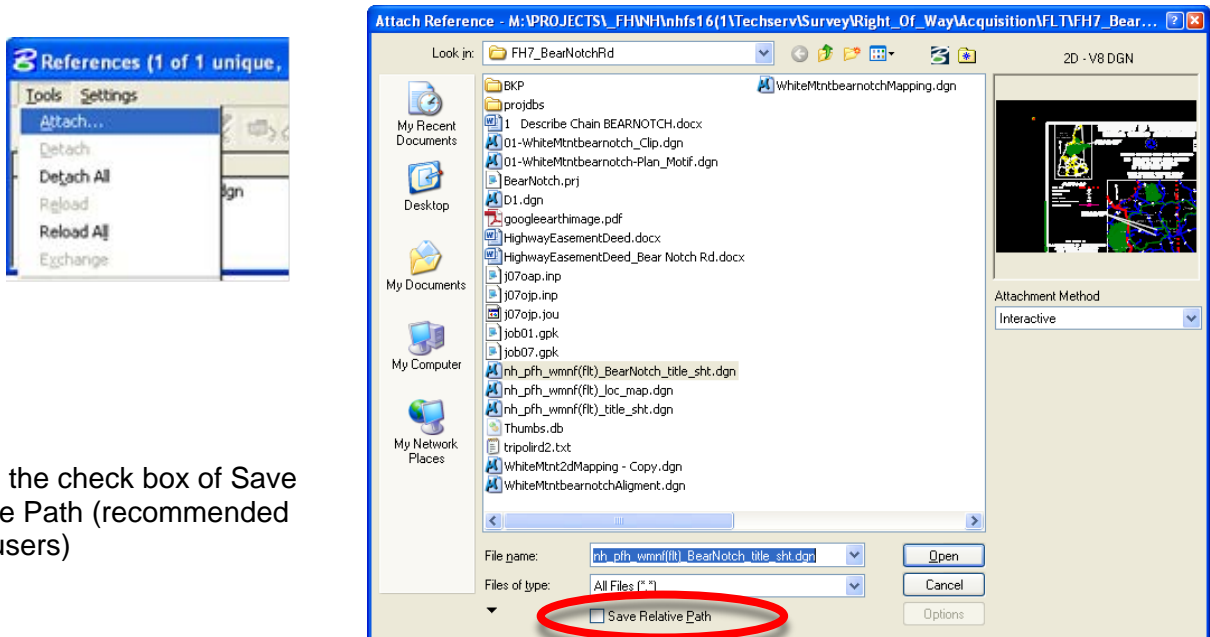
A reference file must be a design (dgn) file or DWG (AutoCAD) file that is attached to the design file in which you are currently working. User can also attach the current file to itself. Drawing files in other format e.g. tiff file, pdf file etc can be attached to your design file through Raster Manager.

A design file or dwg (Autocad) file can be attached to the design file through the Reference Manager as shown below.

- Access Reference Manager through **File > Reference**



- Once selected **Tools>Attach** to attach design file will activate **Attach Reference** dialog as shown below.

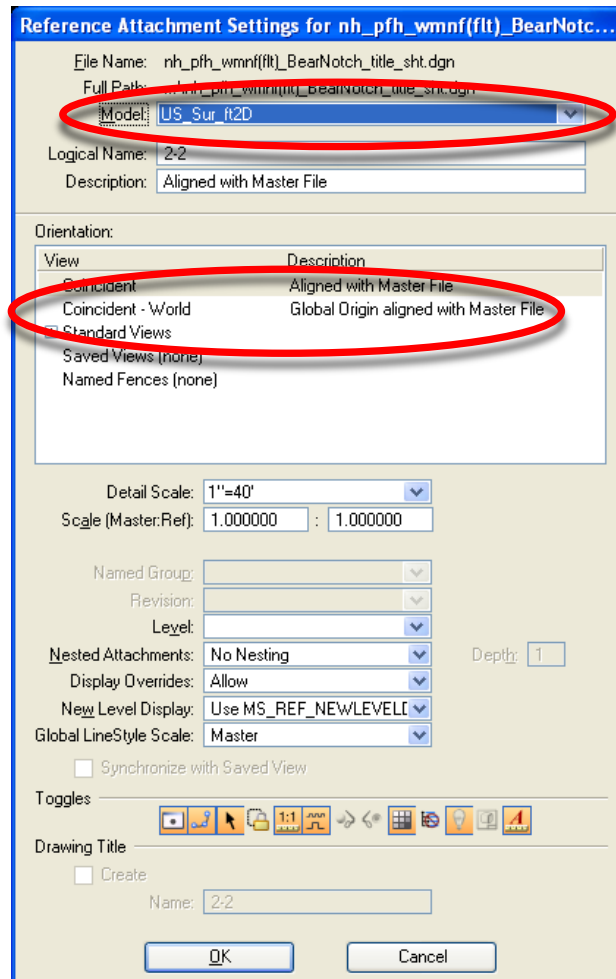


Enable the check box of Save Relative Path (recommended for all users)

Save Relative Path setting as shown in the **Attach Reference** dialog box circled in red has essentially replaced the Save Full Path option of earlier versions, Reference file attachments are searched for in the following manner if not checked:

1. Active directory
2. Relative path directory
3. MS_RFDIR directory
4. Full path directory

- Select the design file to be referenced from the Attach Reference dialog and click **OK**.



- Select the **Model** you want to reference.
- ALWAYS select **Coincident – World**.
- Click **OK** to attach the selected model of the design file.

3.4 – Models

3.4.1 – Introduction to Models

A V8i design file is a container of models, each of which behaves much like a separate design file. MicroStation V8i design files can contain more than one "model" -- each model is analogous to an entire design file. When you set up a new DGN file in MicroStation V8i, you automatically create at least one model within your new DGN, whether you know it or not. You can create an unlimited number of models in a DGN file. Every model has its own set of eight views.

Design models can be either 2D or 3D. A design model can also be used as a reference or placed as a cell. There are two types of models: DESIGN or SHEET. By default, the view windows of design models have black backgrounds and those of sheet models have white backgrounds (EFLHD Highway Design prefers Design models rather than Sheet model, except when used for quantity sheets).

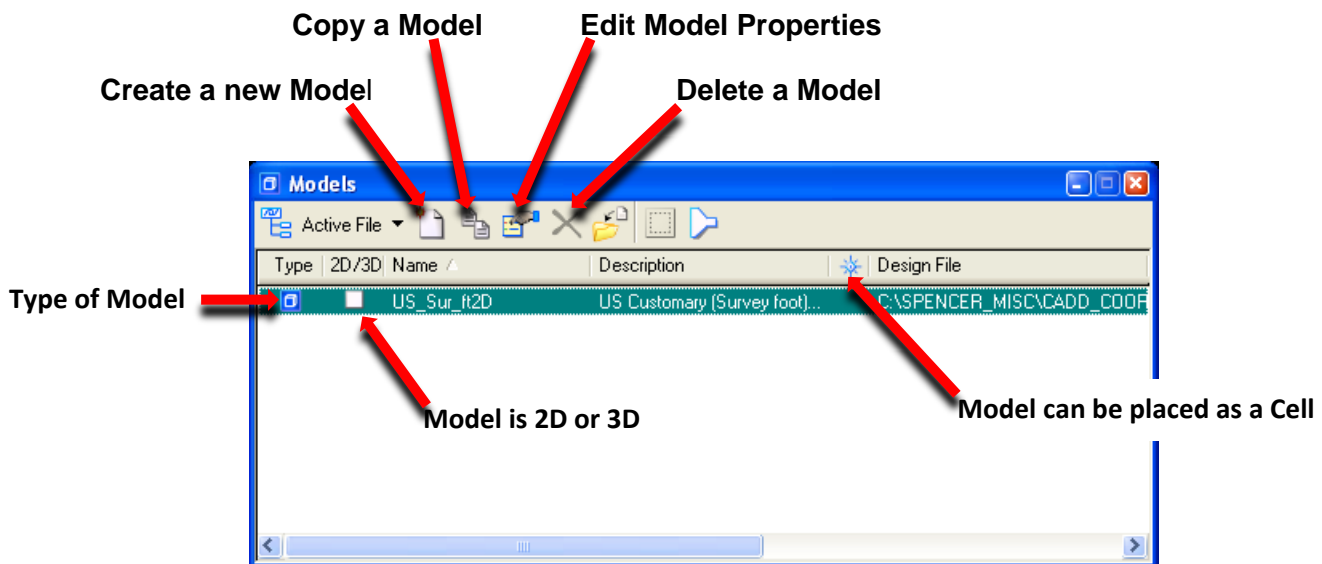


In EFLHD's configuration set up, Models are set to be created ALWAYS in 2D for 2D dgn files and 3D for 3D design files (Use the default seed file "Sur_ft2D" for 2D dgn files and Sur_ft3D for 3D dgn files)

3.4.2- Models dialog box

MicroStation V8i offers a simple dialog box to manage models. The Models dialog box can be accessed through **File > Models** or by clicking on the Models icon.

The Models dialog box is explained in the graphic below:



3.4.2- Tips on Models

- To switch between the models, you simply double-click on the model name in the Models dialog box or select a view group associated with the desired model.
- Each model has its own reference attachments. When you attach a reference, one of the new parameters you set is to enable the model to access part of the reference definition.
- You can also drag and drop DGN or DWG files from Windows Explorer into the Models dialog box to import the models from the selected files. Similarly you can use drag and drop to drag models from the Models dialog in another open session of V8i to the Models list box and drop them in to import the models.

EFLHD prefers to use Models on the following sheets of PS&E Plan set.



- **Typical Sections** (If you have more than one sheet of Typical Sections, use model).
- **Quantity Sheets** (Use EFLHD Quantity sheet with Excel file).
- **Plan sheet, Plan & Profile Sheet, E&S sheets, Striping Plan sheets** etc., see Plan & Profile Sheet clipping.