MicroStation Printing from Setup to PDF – Part 1

Print Drivers and Pen Tables

Topics Covered

With Digital Delivery on the horizon, MicroStation printing will become the primary method of creating the files to be digitally signed.

- MicroStation Printer Configuration Files (.PLTCFG)
  - ✓ Used to create output
- Pen Tables
  - ✓ Used to customize output

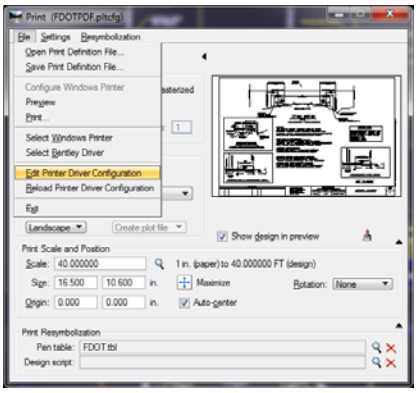
Printer Driver Configuration Types

- PDF Printer Driver
  - ✓ Used to create PDF files.
- PostScript Printer Driver
  - ✓ Can create Postscript files or print directly to Postscript compatible printers.
- Windows Printer Driver
  - ✓ Can print to a specified Windows printer or the default Windows printer.
- HPGLRTL Printer Driver
  - ✓ The HPGLRTL printer driver produces HPGL-2 vectors from vector data sources and RTL raster from raster data sources.

Editing Printer Drivers

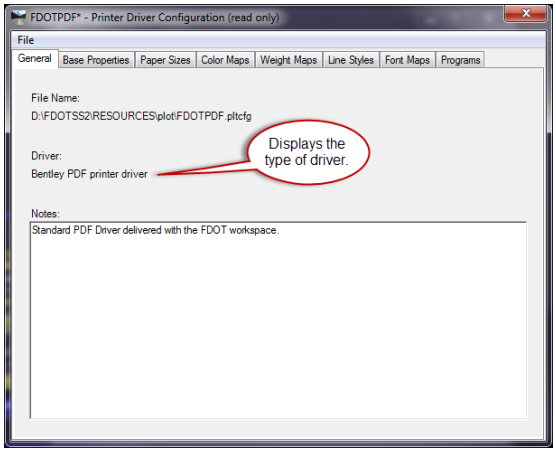
To edit a Printer Driver select File > Edit Printer Driver Configuration from the Print dialog.

- When you open a PLT file for editing MicroStation opens the file in Notepad.
- When you open a PLTCFG file for editing MicroStation opens it in the Printer Driver Configuration editor.



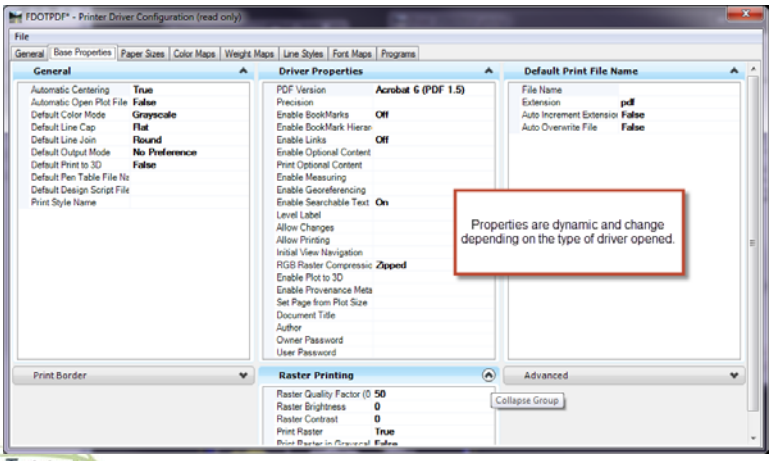
Editing Drivers- General

- The General tab provides basic information on the driver and provides a place for comments or instructions.

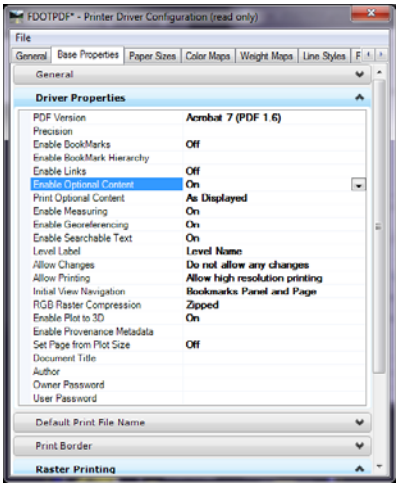


Editing Drivers – Base Properties

- The Base Properties tab is divided into several categories. This is where most changes will be needed.



PDF Properties

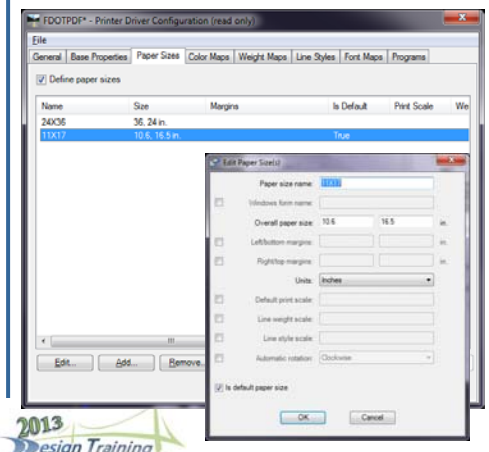


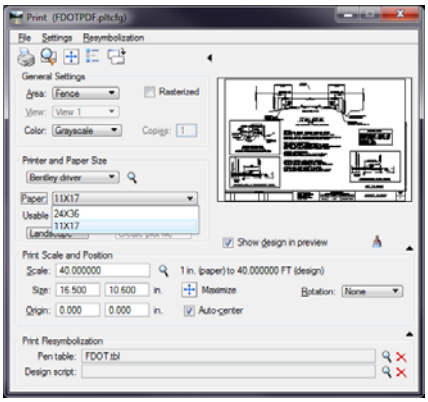
PDF has enhanced abilities.

- Enable Optional Content must be on for enhancements to work
- Geographical Coordinate system must be set for GPS Coordinates to display in Reader.
- The Precision property controls the number of digits after the decimal point used in coordinates written to the PDF file. Higher precision improves print quality, especially for TrueType text, at the expense of larger PDF file sizes.

Editing Drivers – Paper Sizes

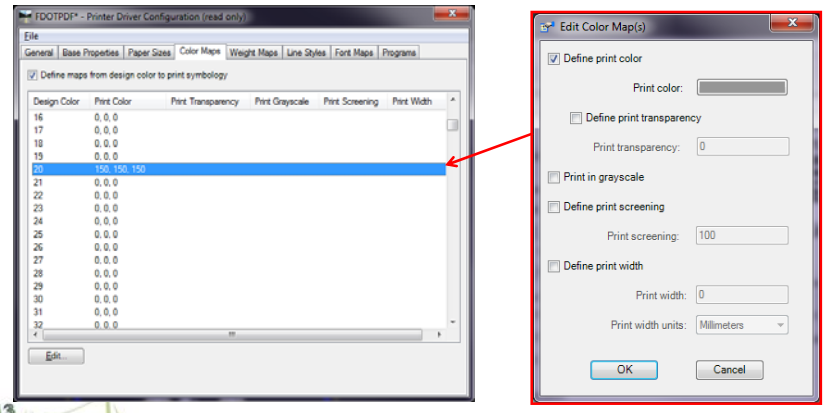
- This is where the page sizes are defined.
- FDOT Plot borders are 10.6 by 16.5





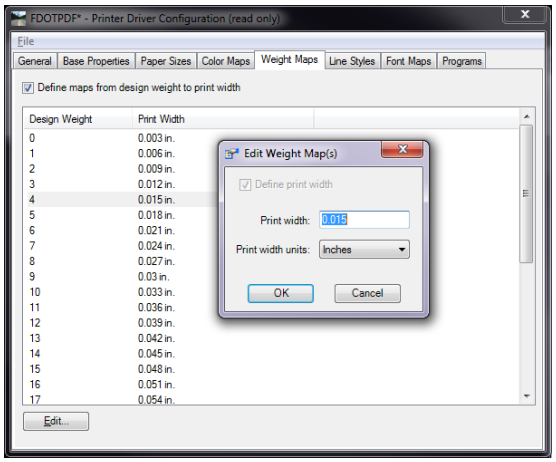
Editing Drivers – Color Maps

- The Color Maps tab allows you to define pen colors.
- Color 20 is the standard grayscale color.



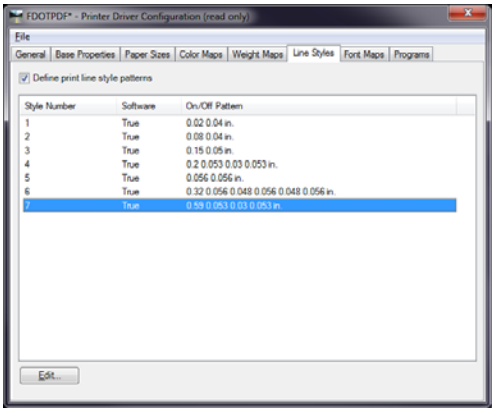
Editing Drivers – Weight Maps

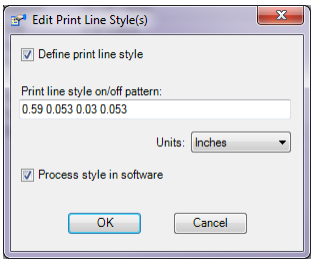
- The Weight Maps tab is where the line thickness for each MicroStation weight is defined.



Editing Drivers – Line Styles

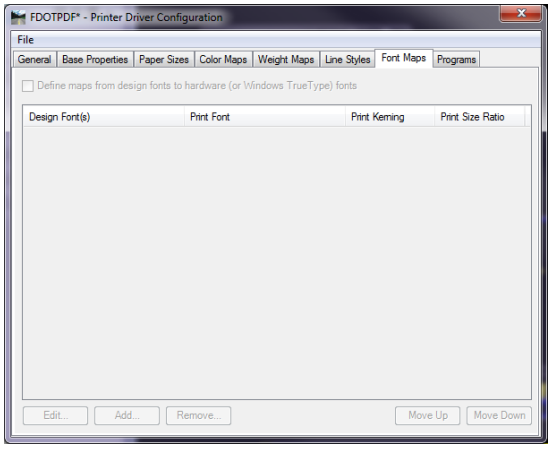
- The Line Styles tab is where you define how each of the standard MicroStation line codes are plotted.





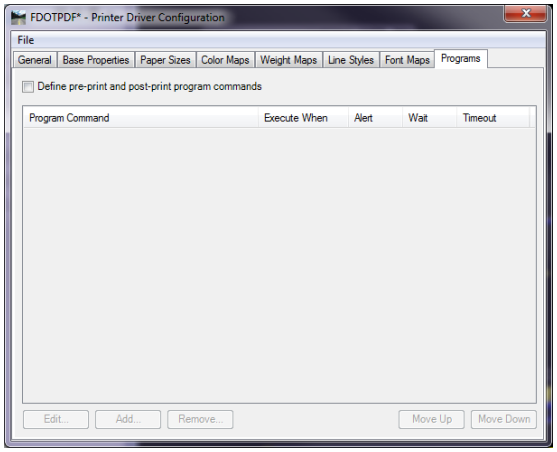
Editing Drivers – Font Maps

- The Font Maps tab allows you to select a Windows font (like Arial) to be used in place of a MicroStation font.



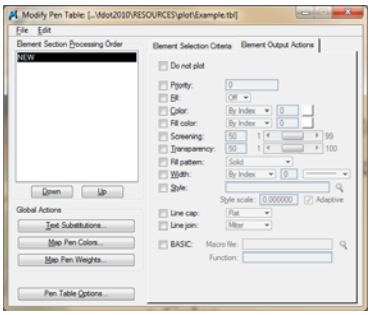
Editing Drivers – Programs

- The Programs tab lets you define a program that will be run either before or after each print.



Pen Tables

- Pen tables are a very effective method of customizing the printed output.
  - ✓ Entire files to single elements
  - ✓ Turn elements off
  - ✓ Change symbology
    - Weight
    - Color
    - Style
  - ✓ Change order (priority)



Pen Tables are Easy

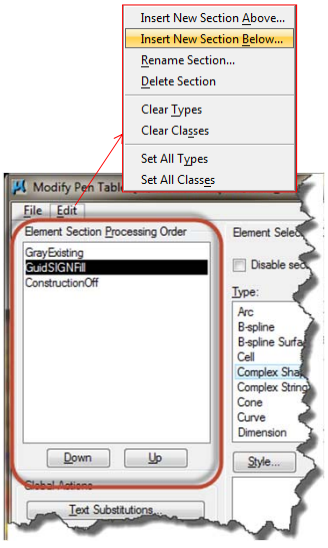
Editing a pen table is very easy. It has 3 basic steps.

1. Insert a Section
2. Define Selection Criteria
3. Define Output Actions

It's like creating a selection set and changing symbology for prints.

1. Insert a Section

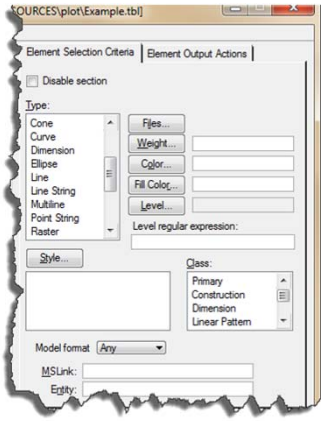
- Insert a section into the "*Element Section Processing Order*" field.
- This holds the Selection Criteria and Output Actions for a particular change.
- Adjust order as needed.



2. Define Selection Criteria

Element Selection Criteria is used to identify the elements to change.

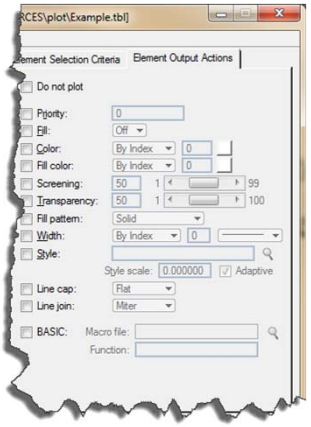
- ✓ Define enough properties to uniquely identify the element.
- ✓ All properties are not required.



3. Define Output Action

Element Output Action is used to define the change in printed symbology.

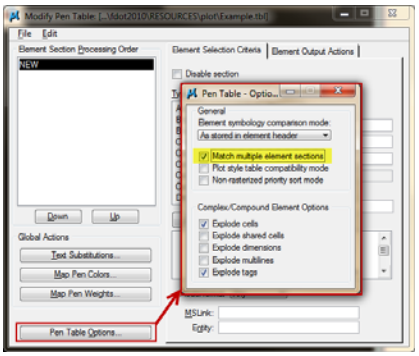
- ✓ Check the box by the attribute to be modified.
- ✓ Set new attribute properties.



Pen Table Options

It can be important to properly configure the pen table options.

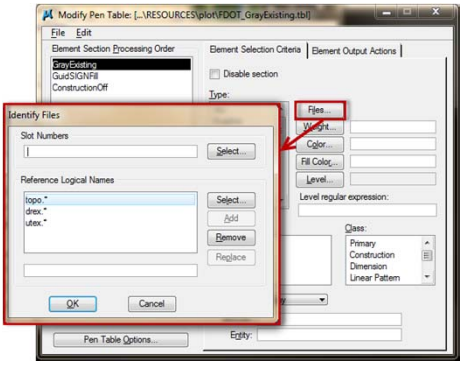
- "Match multiple element selections" is off by default but can be very important.



Grayscale References

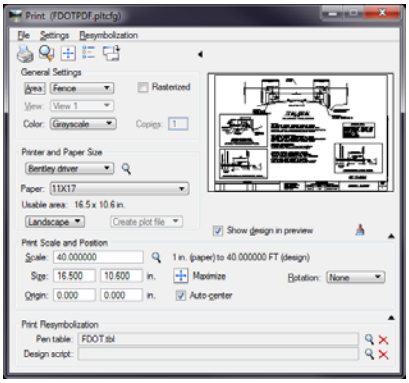
To Grayscale references define Element Selection Criteria based on the Logical Name of reference.

Uses "Regular Expressions" for flexibility.



Single Sheet Printing

- Dialog has been updated slightly.
- Now supports Design Scripts
  - ✓ Design scripts were previously used in InterPlot
- Apply Print Styles to quickly define print properties.
- Rasterized – creates an image which is printed.
  - ✓ Can't have searchable text



Print Styles

- Print Styles allow you to define and reuse named collections of print definition properties.
  - ✓ Paper Size
  - ✓ Pen Table
  - ✓ Plot Driver
  - ✓ Fence Definitions (plot border)
- They can be used in both Print Organizer and the Print dialog.

Commonly Reported Issues

- Image Not Printing
  - ✓ When image files are attached they are placed on the active level. If that is a non-plotting level the image will not print.
- Cross Sections Print Slow
  - ✓ The xs.tbl pen table is designed specifically for cross section files and dramatically speeds up printing.