



HYPLOT Title Blocks - Unleashed

By Bill Bergmann

WHY WE DID IT

Users know how they want a title block to look, often in excruciating detail. Relaying the specifications to a HYPACK programmer for a custom designed block was both time-consuming, in the sense of the develop, customer review, and change cycle, but also costly. If not overly expensive it still wasn't free. Custom blocks were hard-coded inside the HYPLOT program, which meant once it was written it was inflexible to change. The work required to create a block made it an unprofitable endeavor for HYPACK. Regardless, we provided this service for our customers, since there was no other way to make one. Until now that is!

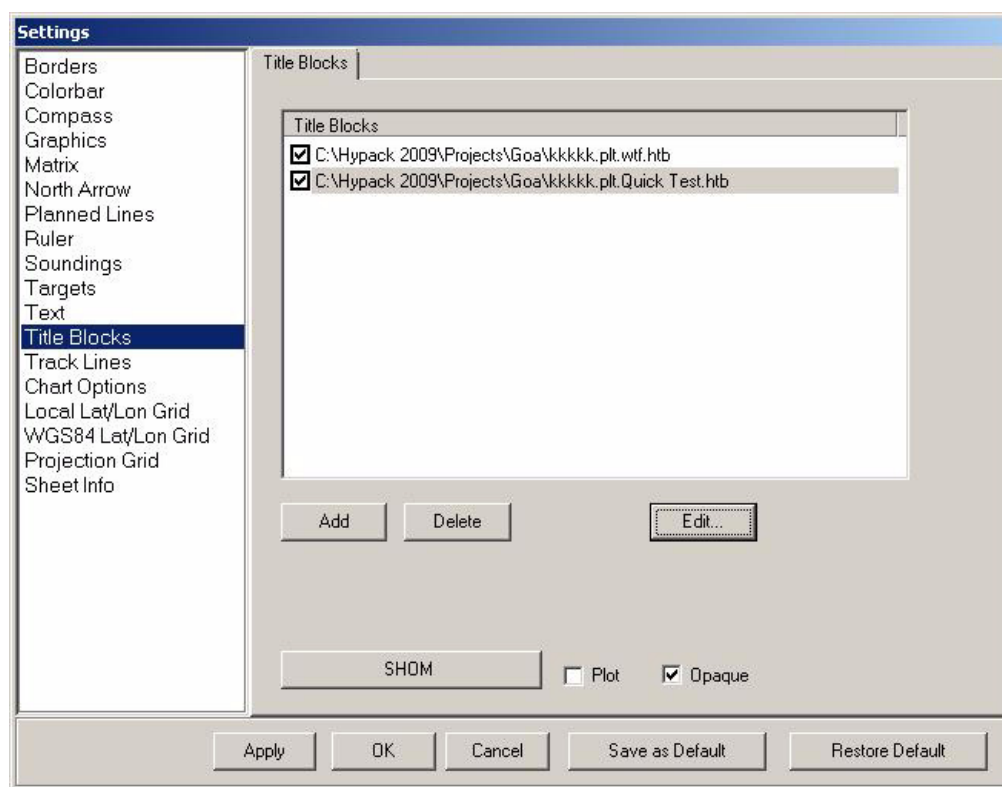
WHAT IS A TITLE BLOCK ANYWAY?

A title block is typically an area on your plotting sheet which gives important information regarding the plot. This may include Identification information, like the name of the area represented, approval signatures and notes about data validity, uncertainties represented, etc. There are a number of template title blocks distributed with HYPLOT, covering a variety of purposes. Many of these were developed for and funded by different customers over the years. If you don't find one to suit your purposes, you can now easily create your own! Or, if you find one that is close but needs a few changes, you can modify it with little effort.

BLOCK TEMPLATES VS BLOCK INSTANCES

The definition of a HYPLOT title block is stored in a file with an .HTB extension. When you create a new block it will be stored in a Template folder inside your HYPACK directory. The blocks in this location can be added to any plot project. Just go to the Title Blocks page of the Settings form, see below, click the Add button and make a selection. The template block (the Template) will be copied into your current project (the Instance) and renamed appropriately to avoid conflicts. This project-specific copy can now be customized, text changed etc. The Template or master copy of the block is left alone. All management of block Instances is performed in this part of HYPLOT. To create a new title block or modify an existing template block, you launch the Title Block Editor from the menu on the main HYPLOT window. The editor in both cases, for the Instances or Templates is the same, but behaves slightly differently to appropriately handle Save operations. Given this setup, adding a brand new block to a project would be a two step process. 1. Creation of Block and Saving it to the Template Folder. 2. Adding it to the Project and customizing it at will. I would imagine Step 2 would be the only step required for the majority of projects, once you have the Block template desired.

FIGURE 1. *Selecting your Title Block*



THE EDITOR

Below is a screen shot of the Title Block Editor. The building block of a title block is a smart box. This entity encapsulates both a spatial foot print and attributes affecting its visual presentation. Combining a number of these boxes, though apparently simple, can produce a wide range of Blocks. In fact, all the prior Title Blocks which were hard-coded in HYPLOT were redesigned using the editor. The differences are imperceptible except the new block format is much more flexible for you.

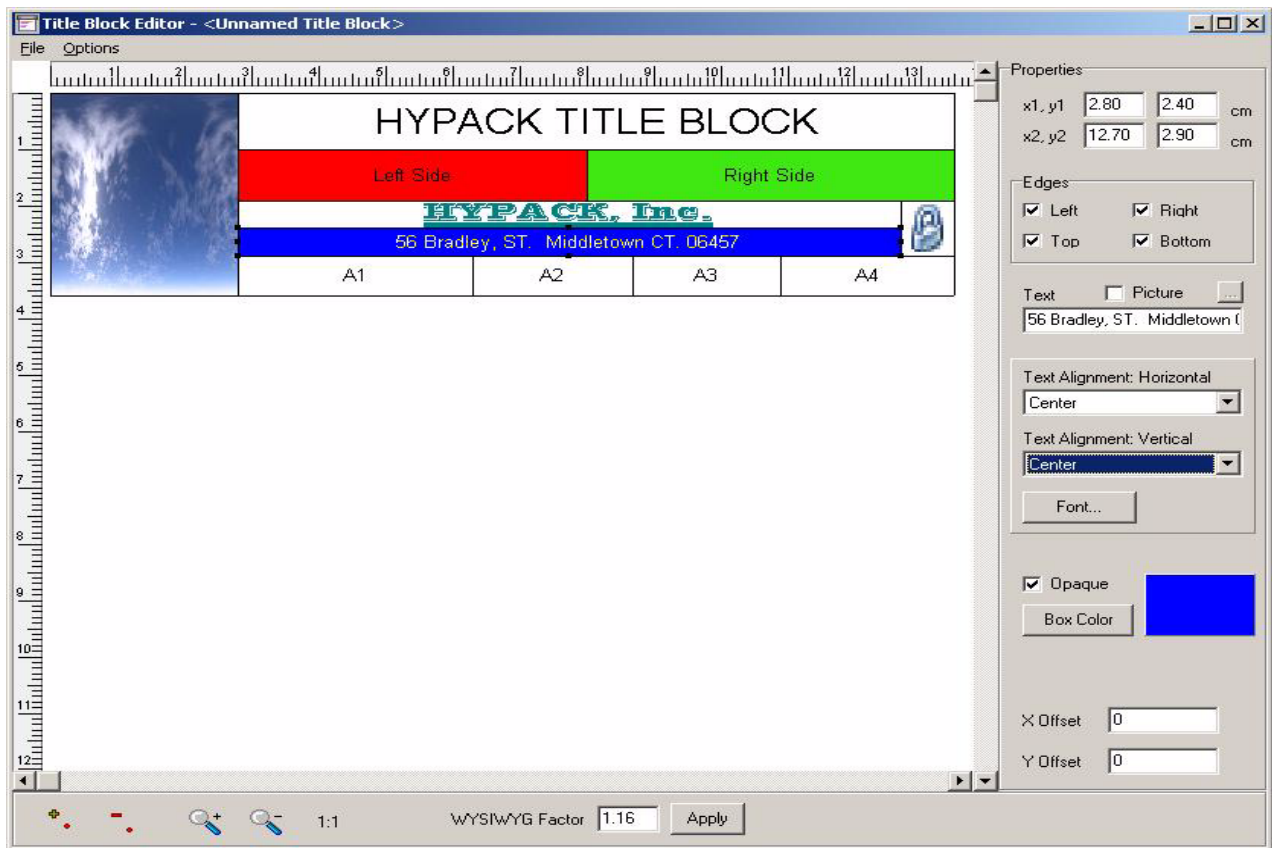
BOX DIMENSIONS

A box has dimensions which are specified by two pairs of x,y coordinates. The editor allows you to edit these coordinates manually but also supports visual dragging, dropping and resizing with the mouse. I use this method almost exclusively when designing. Under options, you can choose millimeters, centimeters or inches for design units. One nice feature is called snap to grid, which makes lining up box edges a snap. Selectable grid granularity is currently either 1 millimeter or 1/16 inch. An optional ruler, showing along the Top and Left edges, can also aid in the overall layout.

BOX ATTRIBUTES

Selectable display of the edges (sides) of the smart box aides in simulating the look of existing forms. An Opaque option, when checked, allows the box to be filled with a color. The content of a box is typically either text or a picture. For text, each box maintains all font options individually, as well as horizontal and vertical alignments. Pictures are imported by selecting the Picture Text box and loading a jpeg image. A third option, Shape, currently supports either a hollow ellipse or solid triangle. Usage of this can be seen in the St. Lawrence Seaway blocks.

FIGURE 2. Sample Title Block in the Title Block Editor



Using the Editor Click the red [+] at the bottom of the editor to drop a box. Drag into place with the mouse and re-size to desired dimensions by dragging any of the eight drag handles (visible in the active box). Pressing the red [-] will remove the currently active box. You can zoom in/out in the editor to help fine placement work. All elements will rescale automatically. Scroll bars along the right and bottom edges allow for editing of larger blocks.

THE MASTER BOX

There is one box that sits under all others. This box has edges and can be colored filled, but there is no font or picture support. To access the properties for the master box click any blank part of the editor screen. Its dimensions are entered manually. This box represents

the dimensions of the Title Block itself. These are important for dragging the Block on the HYPLOT main screen and for docking. There are two areas, Plot Sheet and Title Area, with four anchor edges, giving a total of eight edges to which the Block can be fixed. Actually, selecting 'Area=Plot Sheet' and 'Parent Anchor=Bottom,Left' puts the block into a free floating mode on the HYPLOT screen, allowing it to be dragged with the mouse. In this mode, the offsets from the edges will be shown in the X Offset and Y Offset boxes.

MISCELLANEOUS

The WYSIWYG box allows you to put in a scaling factor if you wish to see a measured unit on the screen equal its length in the real world. For Instance, I used an inch grid and measured the screen ruler inch at approx 13.7/16ths of a real inch. This gives an adjustment factor of $16/13.7 = 1.16$. Entering in this value, pressing apply and measuring the screen ruler now gives a very close match to my physical ruler.