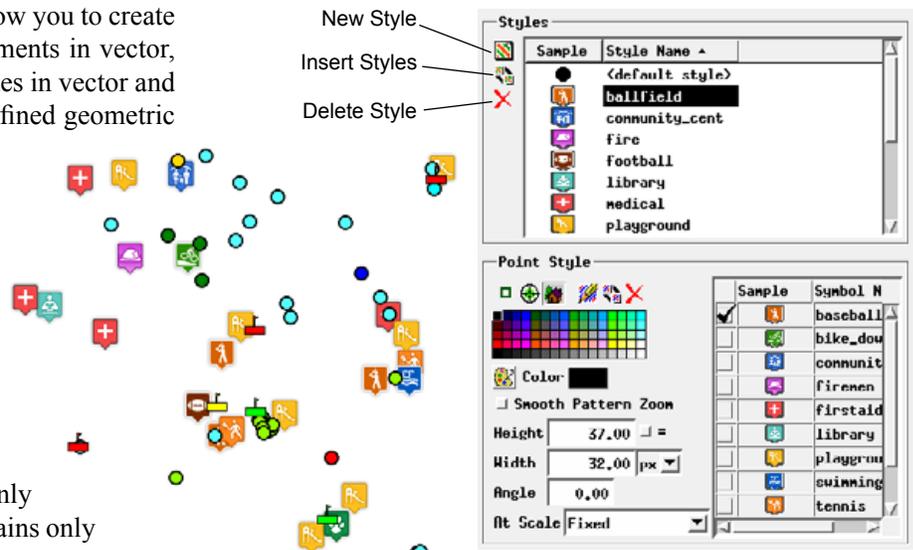


Creating Styles for Points

The Point Style controls in the Style Editor allow you to create and save styles to use in displaying point elements in vector, CAD, shape, and LIDAR layers as well as nodes in vector and TIN objects. Points can be styled using predefined geometric shapes in various colors, using custom vector graphic symbols that you design or import, or using bitmap symbols that you create or import. Point styles can be created and used when you style points using the All Same, By Attribute, and By Theme options and can also be referenced and used in style scripts with the By Script option.

The controls for creating and editing point styles are illustrated to the right. When you create an All Same point style, you can create only a single style, so the Style Editor window contains only the Point Style controls. In the Style Assignment window for By Attribute styling and in the standalone Style Editor (Tools / Edit Styles) you can create and save multiple styles. In these contexts a Styles box above the Point Style controls provides a list of the styles with the name and sample for each. The style list always includes a <default style> entry based on the current All Same style for points. Press the New Style icon button to the left of the list to create a new style based on whichever style is currently selected in the list. New styles are automatically assigned a default name, which you can edit in the list to provide a more meaningful name. (If you name the style to match the attribute value of the elements it is designed for, the Style Assignment window provides an option to automatically assign styles by name; see the Technical Guide entitled *Manual Style Assignment*). Changes made with the Point Style controls apply to whichever style is currently selected in the list. You can use the Insert Styles icon button to navigate to and select styles from another style object to copy to the list. The Delete Style icon button deletes the selected style from the current style object.



geometric shapes (box, circle/ellipse, triangle, diamond, and stars) as well as several crosshairs symbols. Turn on the checkbox for the predefined symbol you wish to use for the current style. All of these symbols have a variable color component, so the color of the symbol can be set for the current style using the color controls described on the next page.

Symbol: Turn on the Symbol icon button to use a custom geometric symbol for the point style. This selection activates the *Create or Edit Symbol* and *Insert Symbols* icon buttons to the right. Symbols you have created or selected are also shown in the symbol list on the right side of the controls. Turn on the checkbox for the symbol you wish to use.

Bitmap: Turn on the Bitmap icon button to use a bitmap pattern element as the marker for the current style. This selection activates the *Create or Edit Bitmap* and *Insert Bitmaps* icon buttons to the right. Bitmaps you have created or selected are also shown in the symbol list on the right side of the controls. Turn on the checkbox for the bitmap symbol you wish to use.

Point Style Controls

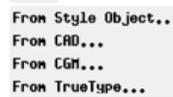
Icon buttons at the top of the Point Style box allow you to choose Predefined, Symbol, or Bitmap options for a point style. The latter two options activate additional icon buttons to create, insert, and delete symbols or bitmaps. Controls are also provided to set the height, width, angle, and scale for the point markers.

Predefined: Turn on this icon button to choose from a number of predefined geometric symbols that are shown in the list in the right side of the Point Style controls (see illustration to the right). These symbols include outline and filled versions of simple

Sample	Symbol Name
<input type="checkbox"/>	Box (outline)
<input checked="" type="checkbox"/>	Box (filled)
<input type="checkbox"/>	Circle/Ellipse (outline)
<input type="checkbox"/>	Circle/Ellipse (filled)
<input type="checkbox"/>	Crosshair (simple)
<input type="checkbox"/>	Crosshair (enhanced)
<input type="checkbox"/>	Triangle (outline)
<input type="checkbox"/>	Triangle (filled)
<input type="checkbox"/>	Diamond (outline)
<input type="checkbox"/>	Diamond (filled)
<input type="checkbox"/>	4-Point Star (outline)
<input type="checkbox"/>	4-Point Star (filled)
<input type="checkbox"/>	5-Point Star (outline)
<input type="checkbox"/>	5-Point Star (filled)
<input type="checkbox"/>	6-Point Star (outline)
<input type="checkbox"/>	6-Point Star (filled)
<input type="checkbox"/>	Crosshair (rotated)

Create or Edit Symbol/Bitmap: Pressing this icon button opens the Symbol Editor if the Symbol mode is selected (see the TechGuide entitled *Symbol Editor*) or the Bitmap Pattern Editor if the Bitmap mode is selected (see the TechGuide entitled *Bitmap Pattern Editor*). These editors allow you to create or edit markers and save them to the current style object.

Insert Symbols: Pressing the Insert Symbols icon button exposes a menu (shown to the left) allowing you to choose the source of the geometric symbols you want to use. You can copy one or more symbols from a style object

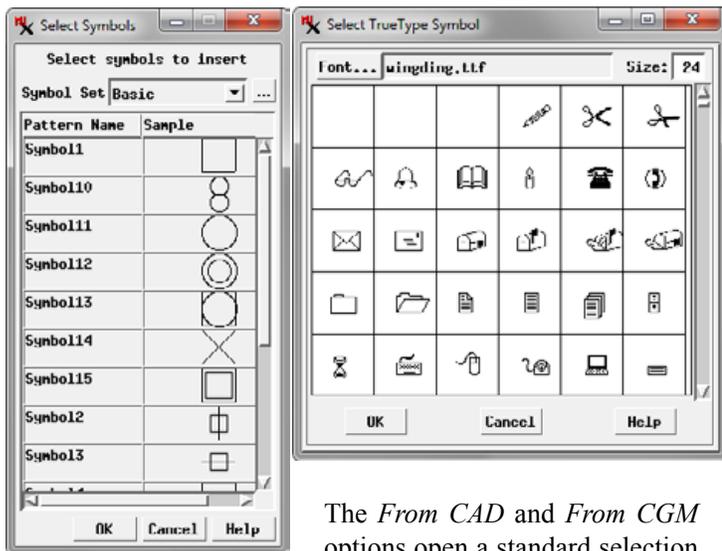


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(style library), from a CAD object in a Project File, or from a CGM (Computer Graphics Metafile) file. You can also copy a glyph from any TrueType font such as Wingdings.

When you choose the *From Style Object* option, the Select Symbols window (illustrated below) opens. This window by default shows a Basic collection of point symbols that are provided with TNTgis. The Symbol Set menu provides a list of additional provided collections of symbols that you can choose. You can also press the Browse icon button to the right of the Symbol Set menu to navigate to and select any style object in any Project File as the source for the symbols.

The list in the Select Symbols window includes the symbol name and a graphic sample. Left click on an entry in the scrolling list to select it (as shown by black highlighting). Hold down the Shift key while left-clicking again to select a contiguous range of patterns, or hold down the Ctrl key while left-clicking to toggle selection on or off for an entry. After highlighting one or more symbols in the list, press OK. The selected symbols are copied to the current style object and are added to the symbol list in the Point Style controls.



The *From CAD* and *From CGM* options open a standard selection window that you can use to navigate to a CAD object in a Project File or to a CGM file (respectively) that contains the symbol graphic you wish to copy. The *From TrueType* option opens the Select TrueType Symbol window (illustrated above).

Use the Font pushbutton to select an installed TrueType font. The glyphs in the font are shown in an array of squares in the scrolling list. Left-click on the desired symbol glyph and press OK to add the symbol to the current style object.



Insert Bitmap: Pressing the Insert Bitmap icon button exposes a menu (shown to the left) allowing you to choose the source of the bitmap symbols you want to use. You can copy one or more bitmap symbols from a style library or style object, or import a bitmap symbol from an ICO or PNG file.

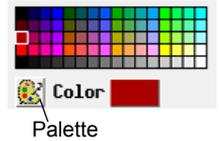
Choosing the *From Style Object* option opens the Select Patterns window, which is very similar to the Select Symbols window described and illustrated above. The Pattern Set menu in this

window lets you choose one of several collections of predefined bitmap patterns as the source, or you can browse to choose a pattern from a style object in a Project File. The Select Patterns window shows each of the small bitmap pattern units replicated as they would appear in a polygon fill, but the pattern unit is used without replication as a point symbol.

The *From ICO* and *From PNG* options open a standard selection window that you can use to navigate to and select the file containing the bitmap symbol you wish to import.

Delete Symbol/Pattern: Press this icon button to delete a symbol or pattern that you have highlighted in the list in the Point Style controls. (Highlight a symbol or pattern by left-clicking on its sample or name field in the list.) The deleted symbol or pattern is removed from the current style object.

Color Controls: You can choose a color for a point style by left-clicking on a color tile in the palette shown in the Point Style controls. The selected color is shown on the Color button below the palette. To choose colors from a different palette, press the Palette icon button.



The Select Palette window which opens shows a graphic list of available discrete color palettes. Left-click on the desired palette in the list and press the OK button to show this palette in the Point Style box. You can also create a custom color by left-clicking on the color button, which opens the Choose Color window. The *Set by* menu in this window determines the type of controls that are shown. The menu provides a choice of color models that you can use for specifying a color, including RGB (0-100), RGB (0-255), HIS, and others. Adjust the color sliders or enter values in the numeric fields and press OK to set the custom color, which is then shown on the color button in the Point Style controls.

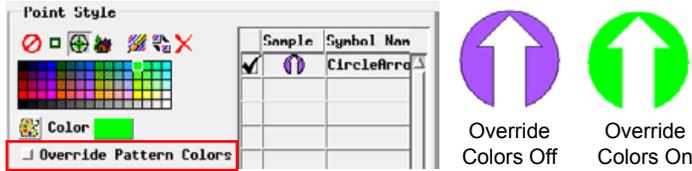


Point symbols and bitmap patterns can include components set to use a *variable* color. Variable-color or pattern components are drawn in the color selected for the style in the Point Style controls. Thus a geometric symbol or bitmap pattern using variable-color components can be used for several styles with a different color set for each style. The style

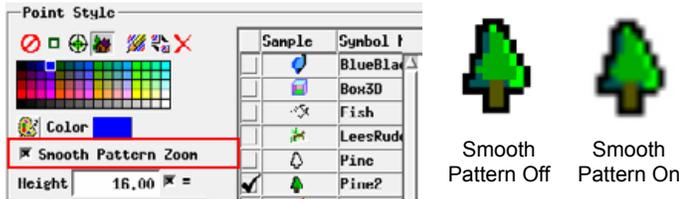
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color selection has no effect on bitmap pattern components that were set to use a fixed color. It also does not affect fixed-color symbol components unless you use the Override Pattern Colors option discussed next.

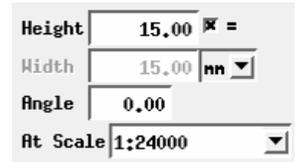
Override Pattern Colors: This toggle button is provided below the color controls when the Symbol mode is selected. When the toggle is turned on, the current style color overrides the stored color for all elements in the geometric symbol; this change is shown immediately in the graphic sample in the symbol list in the Style Editor. This option is most useful when the symbol has a single fixed color; you can use the symbol in several styles that override the stored color with different style colors.



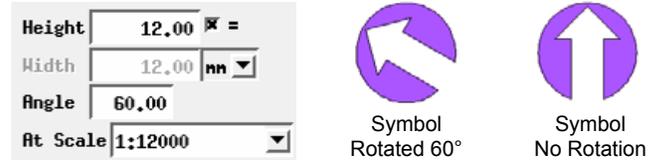
Smooth Pattern Zoom: This toggle is provided below the color controls when the Bitmap mode is selected. When this toggle is turned on, a smoothing filter is applied to the bitmap symbol when it is rendered at a larger size than its pattern dimensions. The smoothing reduces the sharpness of the color boundaries between cells in the magnified bitmap pattern.



Height and Width: Enter values in the Height and Width fields to set the dimensions of the point symbol on screen. When the “=” toggle to the right of the Width field is turned on, the Width is automatically set equal to the height and the Width field is inactive. You can specify symbol dimensions in inches (in), millimeters (mm), pixels (px), or points (pt) using the menu to the right of the Width field.



Angle: You can rotate any symbol by entering an angle value in degrees in the Angle field. Rotation angles are measured counterclockwise.



At Scale: The At Scale setting determines the scale at which the specified height and width apply. You can enter a desired map scale fraction or scale number (e.g., 1:36000 or 36000) in the field or press the arrow icon button to the right of field to open a menu from which you can choose Fixed, Design, or Current. The Current option sets the scale field to the current scale of the associated View window. The Design option sets the style to use the design scale specified for a group or print layout in which the geometric object is used. With these options point symbols will be larger or smaller as you zoom the view in or out. With the Fixed option the symbols are drawn with the same dimensions on screen regardless of the scale of the view.

