Auto Generating Vector Polygon Labels

The Spatial Data Editor can automatically generate labels for selected vector points, lines, and polygons using text you enter, attributes, or a script to produce the label text. This color plate introduces auto-generation of polygon labels. Auto-generating polygon labels is a heuristic process, and the solution is generally not ideal for all polygons. No automatic labeling procedure is completely successful in choosing the best label positions and avoiding all collisions, especially between layers. Think of auto-generating labels as a two-part process. In the first part, you are looking for the best overall solution. In the second part, you interactively reposition or resize those labels for which the automatic solution was inadequate. Label position, size, and angle can be altered by selecting an individual label for editing (see the color plate entitled Interactive Editing of Labels and Leader Lines). New line labeling features are described on the color plate entitled Auto Generating Vector Line Labels.

Automatically generated polygon labels are now positioned in the widest horizontal span of the polygon with preference given to the span that contains the centroid. If the widest span is not large enough for the label, a suitable position is sought in the neighboring polygons and a leader line is added to indicate the polygon to which the label refers. If the label does not fit in the polygon and the longest line making up the polygon’s boundaries is an edge of the vector object, the label may be placed outside the vector’s original extents, again with a leader line to the appropriate polygon. If the label does not fit in the polygon or any of the surrounding polygons, it will be centered over the polygon to which it is attached for later manual repositioning.

Because label position is determined by label size, changing the label size may have a dramatic effect on position. It is recommended that you use the Preview option when auto-generating labels. You can then try various label sizes and fonts to decide on the best overall label solution before labels are added. Label size is determined in one of two ways: by element height or by the assigned label style. Element height is set on the label Metrics panel. It is the same for all labels generated for a single set of selected elements. This element height can later be changed by editing selected labels. A style height is set in the Text Style Editor, which is accessed from the Style tabbed panel. Here you indicate whether each designated style will use the element height or the height you specify in the Text Style Editor.