Creating a TIN from vector features

1 Add the themes containing the features you wish to create a TIN from to a view or 3D scene.

2 Make the themes active by clicking on their legends in the Table of Contents.

3 From the Surface menu choose Create TIN From Features.

4 Use the TIN Builder dialog to define how each theme's data will be used.

5 Press OK.

6 Name the output TIN in the Output TIN Name dialog and press OK.

In the TIN Builder dialog you specify how the features for each active theme are going to be incorporated into the output TIN during the triangulation process. You specify the height source, the surface-feature type, and (optionally) an attribute value field. The active themes are presented on the left side of the dialog in a scrolling list. When you highlight a theme in the list its available properties are displayed in the fields on the right.

The height source for a theme is set in the Height source: dropdown list of the dialog. The options in this list are the field 'Shape' (if the feature class for the theme is a 3D class), '<none>,' and any numeric attribute fields that exist for the theme.

You specify the surface-feature type of the theme in the Input as: dropdown list. The Surface feature types options vary depending on what type of features make up the input theme. If you have a point theme as input the only surface-feature type option will be Mass Points. If you have a line theme the options will include Mass Points plus Hard and Soft Breaklines. If you have a polygon theme the options will include not only Mass Points, Hard and Soft Breaklines, but also Hard and Soft Replace, Erase, and Clip Polygons.

You can tag line and polygon surface features as either hard or soft. Hard features are things like roads, streams, and shorelines that indicate a significant break in slope. Soft features are things like ridgelines on rolling hills. Such ridges separate watersheds and therefore are linear features that you might want to maintain in your triangulation, but don't represent distinct breaks in slope.

The boundary to the modeling area may have no significance in defining the surface morphology, yet you need to maintain it in the triangulation to prevent subsequent analyses from occurring outside its boundary. The boundary is usually assigned to a soft clip polygon as an input feature type.

The order of the input themes is not relevant. The 3D Analyst will automatically arrange the Theme triangulation order according to the surface-feature type assigned to the theme and whether the theme has z values.