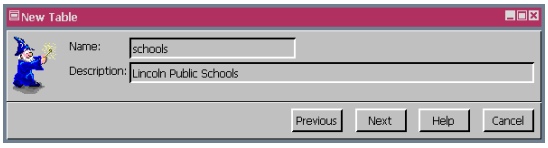
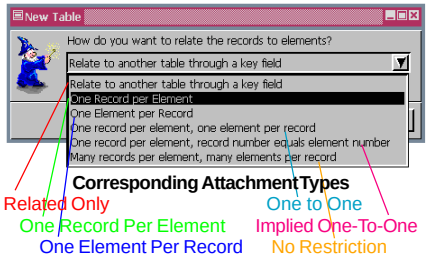
Database Table Creation Wizard

One important distinction between geodata in a GIS system and simple graphics is the addition of attributes as well as geographic information, which means you need to know how to set up databases. If you are going to use a complicated relational structure for your database, you should set the database up in advance. However, if you are simply trying to add attributes as you work, such as while interpreting airphotos, you can set up tables while doing the analysis. In either case the Database Creation Wizard in the TNT products will assist you in setting up new tables when displaying or creating/editing any object type. You can easily create new vector objects, such as local schools, with a phone book and a local streets layer. High resolution reference imagery greatly assists the ease and accuracy of placing points for such features. You should create your database table before you begin adding points (for example, for schools) or other elements when creating vector objects in this manner so you can be prompted for attribute entry when each element is added. Entering attributes when an element is added saves the time of having to reorient yourself to which element is which. The database Prompt feature also automatically creates a new record for each element you add. This feature is most useful for tables with One Record Per Element attachment types. You can create a new database table and then set up database prompting *or* create a new table while setting up database prompting. When you choose to create a table with either method, you get some assistance from the Database Table Creation Wizard to get you started.

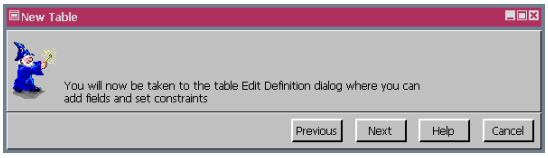


First you are prompted for a table name and description. If you do not want to enter a description, you will need to press <enter> or move the mouse off the window for the Next button to become active.

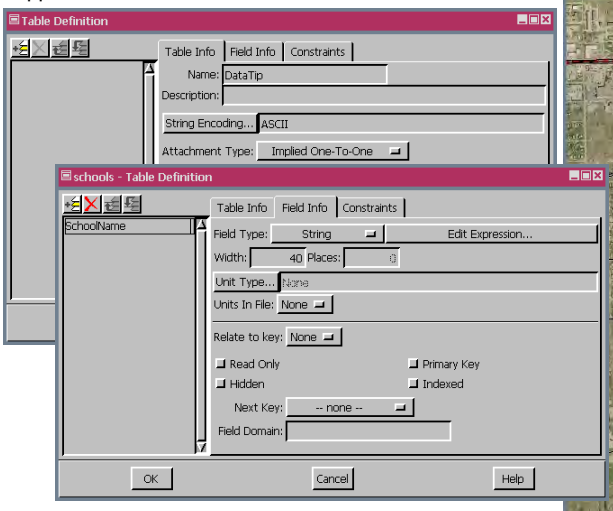
You are next asked how to relate records to elements. The choices shown correspond to the attachment types indicated below.



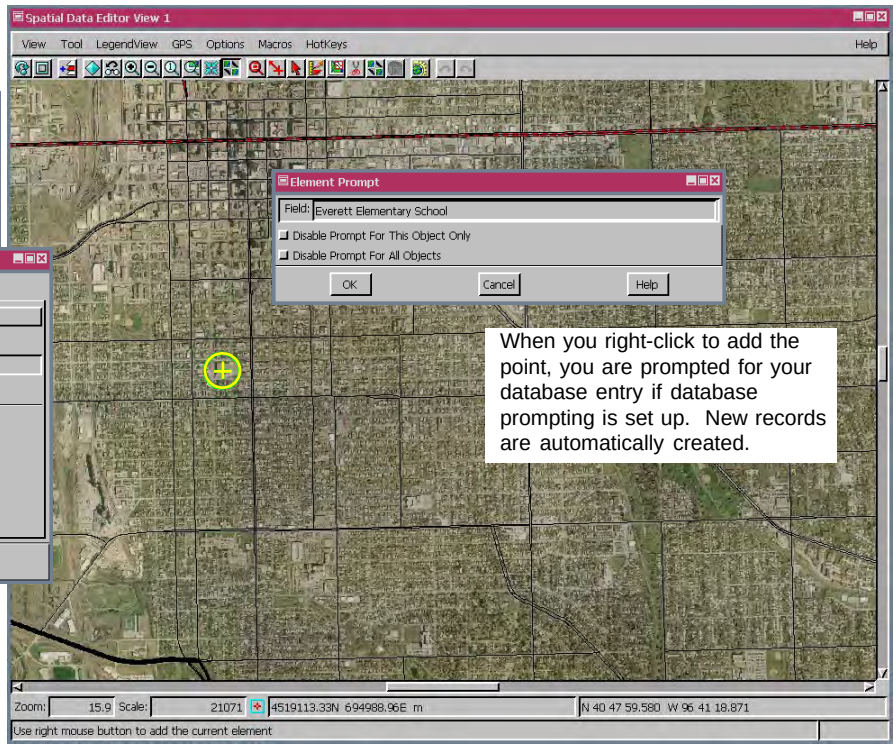
The second panel of the Wizard asks you how you want to relate records to elements, which has important implications for how the table is maintained throughout various operations. It also determines the next step in the Wizard and how the Table Definition window initially appears when opened by the Wizard. Five of the six choices take you through the path illustrated at the left. The other choice, *Relate to another table through a key field*, opens an additional Wizard panel to let you specify the primary key field that relates the tables and sets up the foreign key field pointing to it when the Table Definition window is opened. The additional Wizard panel is shown on the back of this page.



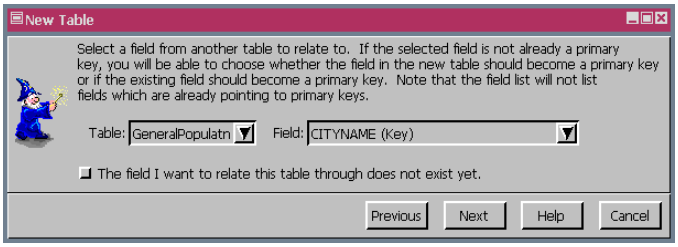
This last panel of the Wizard lets you know what will happen next.



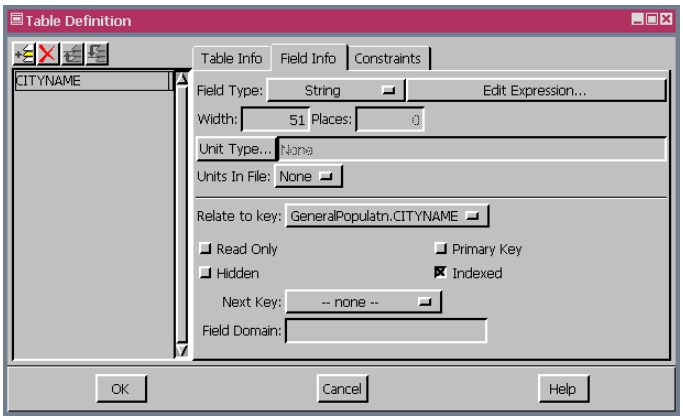
The Table Definition window initially opens showing the Table Info tabbed panel so you can review the relationship set and further specify encoding or other options if desired (upper window). Adding a field (lower window) automatically switches the Table Definition window to the Field Info tabbed panel.

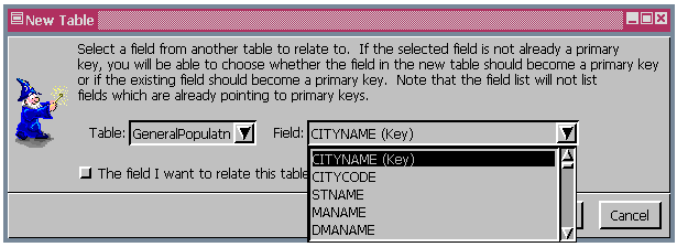


Additional Wizard Panel(s) for Related Only Tables

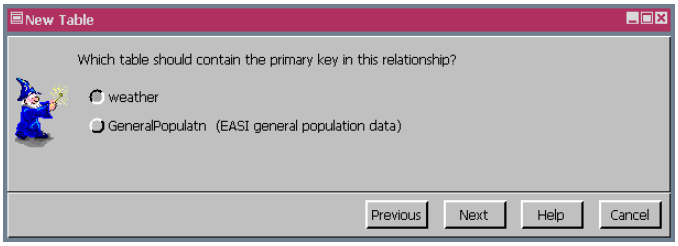
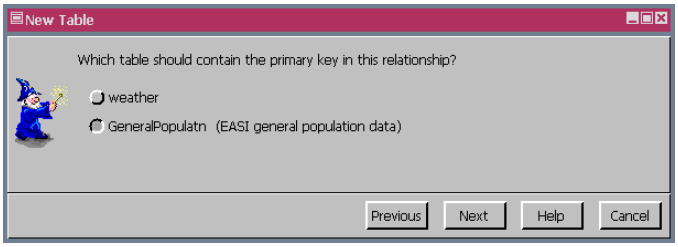
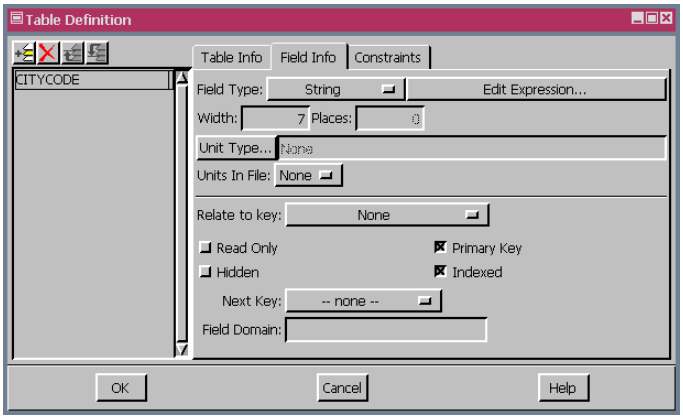
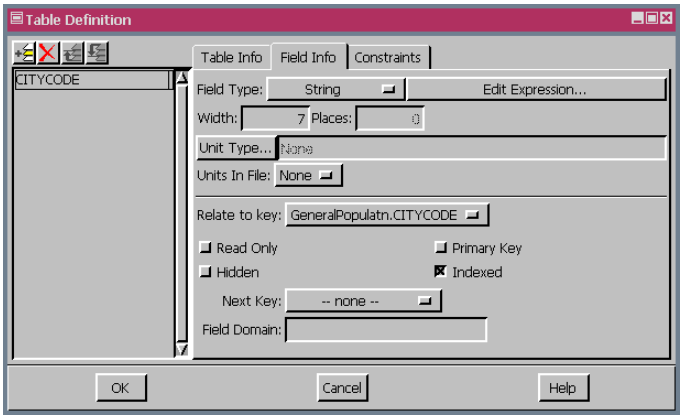
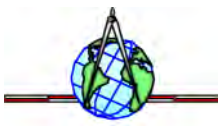


If you choose *Relate to another table through a key field*, you get this panel before going to the Table Definition window. Note that in addition to choosing the table and field to establish the relationship between tables you can instead indicate that the table does not exist yet. If you choose the primary key in an existing table, you get the table definition window at the right with a field named the same as the selected primary key and its foreign key relationship set up.





All fields in the selected table are listed to choose from. If you choose a field that is not currently a primary key field, you will get an additional panel in the Wizard (shown below) asking you to specify which of the two fields (the one in the new table or the one selected from an existing table) should become a primary key so the relationship can be established. If you click on *The field I want to relate this table through does not exist yet* toggle, the table Definition window opens with no initial fields or relationships as on the other side of this page. If there are no other tables in the database, this box is automatically checked.

Choosing a field for the table relationship that is not currently a primary key causes the wizard to ask which table you want to contain the primary key. The result of picking the new table is shown below. When the new table is selected, a field of the same name as in the existing table is added, the *Primary Key* and *Indexed* toggles are checked, and the *Relate to key* option menu is set to None.

When the existing table is selected (below), a field of the same name is added to the new table and the *Relate to key* option menu points to the primary key in the existing table. The *Primary Key* toggle is not checked, but the *Indexed* toggle is on to speed relational searches.