

Direct Display of Shapefiles/Legends/Styles

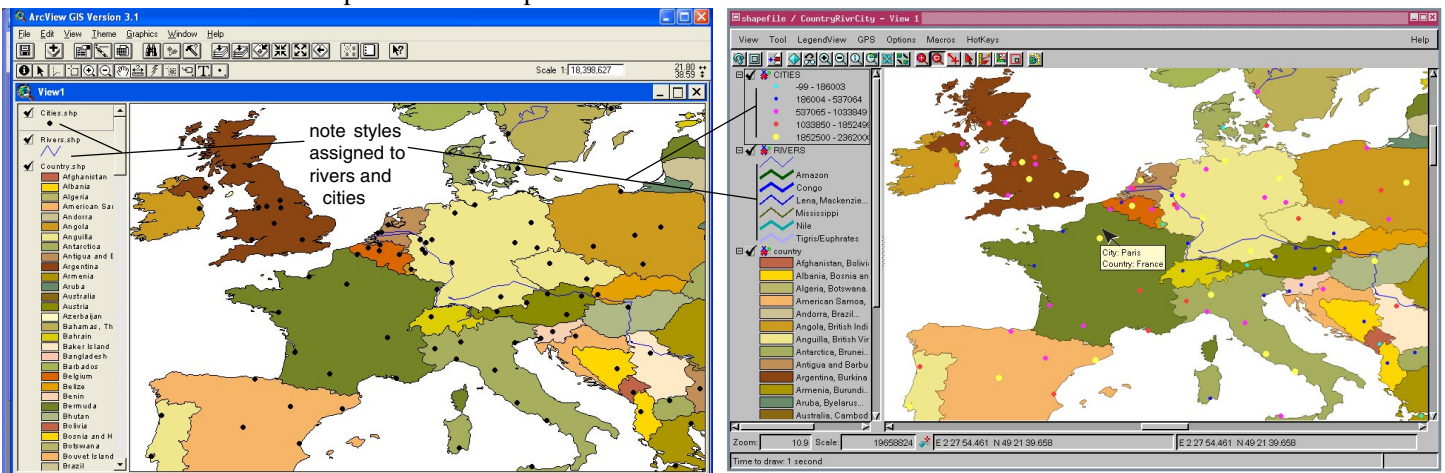


shape object icon

ESRI shapefiles are directly displayed via TNT's internal shape object format, which is suited for display and manipulation of shapefiles and Oracle Spatial data. Shape objects can maintain the same topology as shapefiles, namely polygons should not cross themselves and polygon islands (polygons completely within another polygon) are kept track of. Shape objects have an important distinction shared with vector objects but different from CAD objects in their database structure—shape objects can have identity tables. Identity tables have an implied one-to-one attachment, which allows you to create tables made entirely of virtual fields that massage the data found in other tables, which may be linked source tables in their original format. Note that the transparent link created for direct display will also let you have multiple tables associated with your shapefiles. Such tables are visible only while working with these files in the TNT products. ArcView will only see changes in the .dbf file associated with the shapefile.

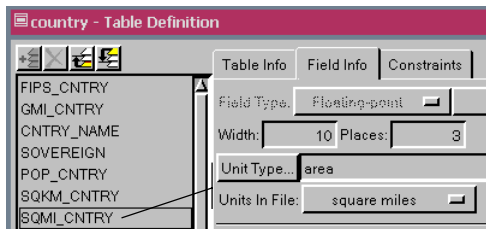
Shapefiles displayed in TNTmips can have additional styles than those shown in ArcView where the display style may be the equivalent of "All Same" in the TNT products. The Rivers shapefile illustrated below had different styles assigned to the rivers of major river basins in TNT, as indicated in the LegendView, while retaining their uniform style in ArcView. The Cities shapefile is displayed by theme with size and color of the points based on population. These styles are saved as a subobject in the transparent link file (shapename_shp.rlk), which is created and saved automatically.

Shapefiles displayed directly can have DataTips, which provide information for the closest element(s) as the cursor is moved. The DataTip setup information is stored in the transparent link file, so you only need to set up your DataTips once. In addition to the simple DataTips available directly from the database (.dbf) file associated with the shapefile, you can easily create a new table to supply multiline DataTips using a virtual field to assemble information from multiple fields in the associated database file. This new table becomes part of the transparent link file.



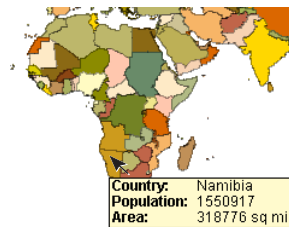
Shapefile displayed in ArcView GIS (above) and TNTmips (right) at the same time. A simple DataTip that presents information from the associated database file is shown with TNTmips.

Unit conversion for database fields is another TNT DataTip feature that can be utilized while directly displaying shapefiles. In any database table, including the associated .dbf file, you can set the unit type (length, area, angle, time, and so on—



more than 50 to choose from) and the units in file from the list for the selected unit type. Once these settings are made, you can change the units for display of the DataTip in the Layer Controls window where the DataTip is specified. The table illustrated has one field for square kilometers and another for square miles. This duplication of fields presenting the same information with different units is not necessary in TNTmips.

Another difference between shapefile display in ArcView GIS and TNTmips occurs in LegendView. The countries of the world shapefile for this example has 25 repeating styles. In ArcView GIS, all 251 of the countries are listed in the LegendView. TNTmips groups attributes with the same style into a single LegendView entry. Although 25 styles may seem like enough to color code a world map, unique colors or some method of assignment other than by alphabet would produce a better result. For example, Angola and Namibia share a border but are 150 countries apart in the list and, thus, have the same color, as do the adjacent countries of South Africa and Zimbabwe and others.



Three fields from the .dbf file have been combined with formatting in a virtual field in a new table. This field can be used to provide a multiline DataTip for a single layer as shown at the left.