The Working with TIGER/Line Shapefiles series is an overview of how to access and use the US Census Bureau's TIGER/Line Shapefiles. Each pamphlet is a quick how-to guide for accessing and using TIGER/Line Shapefiles as well as joining data from the US Census Bureau to the TIGER/Line Shapefiles.

WHAT SHAPEFILES ARE AVAILABLE?

3 and 5-digit ZIP Code Tabulation Areas
Alaska Native Regional Corporations
American Indian/Alaska Native/Native Hawaiian Areas
American Indian Area Tribal Subdivisions
Blocks
Block Groups
Census Tracts
Combined New England City and Town Areas
Combined Statistical Areas
Congressional Districts
Consolidated Cities
Counties and equivalents
County Subdivisions
Landmarks (Point and Area)
Metropolitan/Micropolitan Statistical Areas
Metropolitan Divisions
Military Installations
New England City and Town Areas
New England City and Town Area Divisions
Places
Public Use Mircodata Areas
Roads, Rails, etc. (in All Lines file)
School Districts – Elementary, Secondary and Unified
States and equivalents
State Legislative Districts – Upper and Lower Chambers
Urban Areas
Voting Districts
And Many, Many More

Working with TIGER/Line Shapefiles Series:

1. Downloading TIGER/Line Shapefiles
2. Opening TIGER/Line Shapefiles into ArcGIS
3. Downloading Data from American FactFinder to use with TIGER/Line Shapefiles
4. Joining Census Data to TIGER/Line Shapefiles
5. Creating a Thematic Map

Questions about TIGER/Line® Shapefiles?

Visit:
http://www.census.gov/geo/www/tiger

E-mail:
geo.tiger@census.gov

Call:
(301) 763-1128

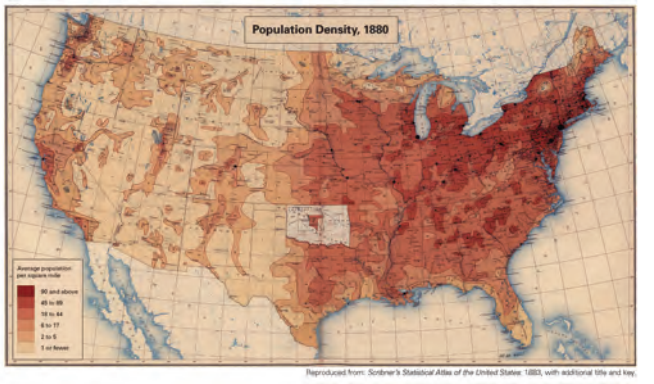
Don't have ArcGIS™?

Download ArcGIS Explorer for **free** from ESRI at:
http://www.esri.com/software/arcgis/explorer

Geographic Products Branch
Geography Division
US Census Bureau
June 2009

WORKING WITH TIGER/LINE SHAPEFILES

Joining Census Data to TIGER/Line Shapefiles



GETTING STARTED

The instructions are for using the 9.x versions of ArcGIS.

The data from American FactFinder should be downloaded in a Microsoft Excel database format. See the brochure "Downloading Data from American FactFinder to use with TIGER/Line Shapefiles" for detailed steps.

The corresponding TIGER/Line Shapefiles should be unzipped in a location on your computer.

PREPARING THE DATA

If the data were downloaded through the American FactFinder's database download option for Microsoft Excel and the descriptive elements were not downloaded, the data are ready to be immediately imported into ArcGIS 9.2 or greater.

If the descriptive elements were downloaded, there will be two header rows in the data. In order for ArcGIS to read the data correctly the row with the descriptive elements must be removed from the file.

If you are using ArcGIS 9.1 or earlier, the Microsoft Excel file needs to be saved as a .dbf file in order to be recognized by ArcGIS.

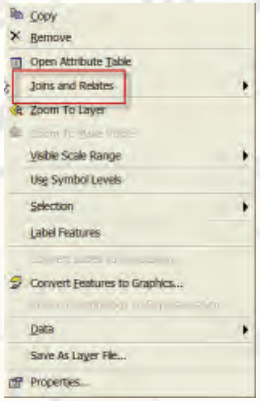
Please note that Excel 2007 no longer has the option to save files as a dbf.

OPEN ARCMAP

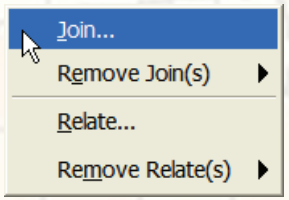
Open ArcMap and add the TIGER/Line shapefiles for the area of interest to the map using the "Add Data" icon or "File - Add Data."

CREATING THE JOIN

Both the data file and the TIGER/Line Shapefiles contain fields that uniquely identify a geographic entity. This is the field necessary for creating a join.



In ArcMap, right-click on the shapefile layer that the data will be joined to. Select "Joins and Relates." From the submenu select "Join."



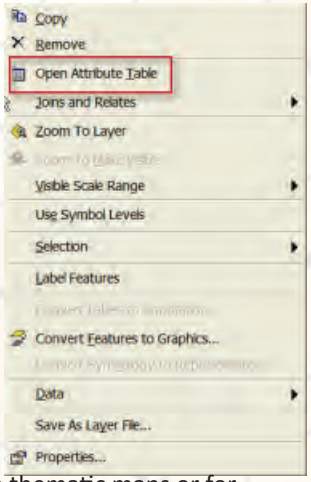
A new screen appears where you select the field from the shapefile that will be used to join the data. You want the field with the fully qualified geographic code. In the county shapefile the field is CNTYIDFP00 (uniquely identifies the county within the nation). The TIGER/Line Shapefiles technical documentation has more information on the record layouts and definition of each field.

The next step is to select the data file. Use the browse (open folder icon) option to navigate to the data file. For ArcGIS 9.2 or later this is the Excel file; for ArcGIS 9.1 or earlier this is the .dbf file you created from the Excel file.

The final step is to choose the field from the data table to base the join on. The fully qualified geographic code in the American FactFinder data download is in a field named "GEO_ID2."

SEEING THE DATA

ArcMap builds a relationship between the shapefile and the data file.

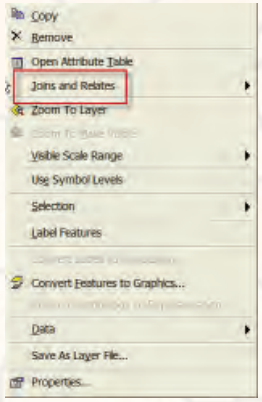


To see the data, open the attribute table for the shapefile. To do this, right-click on the shapefile name and select "Open Attribute Table."

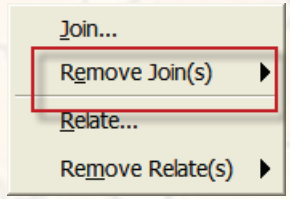
The table now has the attributes from both the shapefile and the joined data. The data can be used to create thematic maps or for other analysis.

Multiple data files can be joined to the shapefile.

REMOVING THE JOIN



Removing the data join is similar to creating the join. Right-click the shapefile layer that is joined to the data to be removed. Select "Joins and Relates."



This time select "Remove Joins." Select the join to be removed or select "Remove All Joins."