

## Lesson 2: More ArcMap Skills

### What You'll Learn to:

- Set relative paths
- Practice map composition
- Change display properties
- Connect to new folders
- Add labels to features
- Measure distance
- Select data
- Use raster data

**Data** are found in the subdirectory \L2, videos in \L2videos.

**What You'll Produce:** Two maps, one of a digital raster graphic and roads, and a second of a aerial photograph and forest stand boundaries.

### Part 1

#### Setting Paths, Practice Composition

As described in the lesson 1, ArcMap project files (saved with an .mxd extension) do not save any real data, but rather serve as a recipe for what data to display, and how to display them. This can present some problems when moving projects among computers, so we'll now show you how to avoid some of these problems.

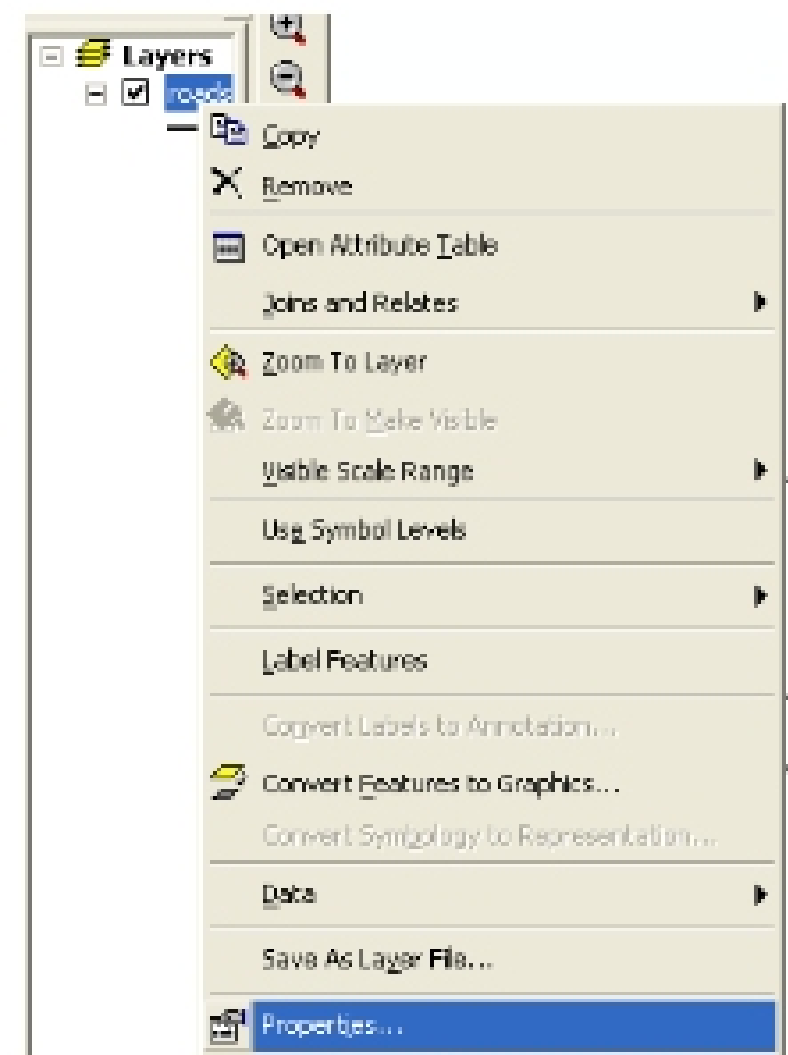
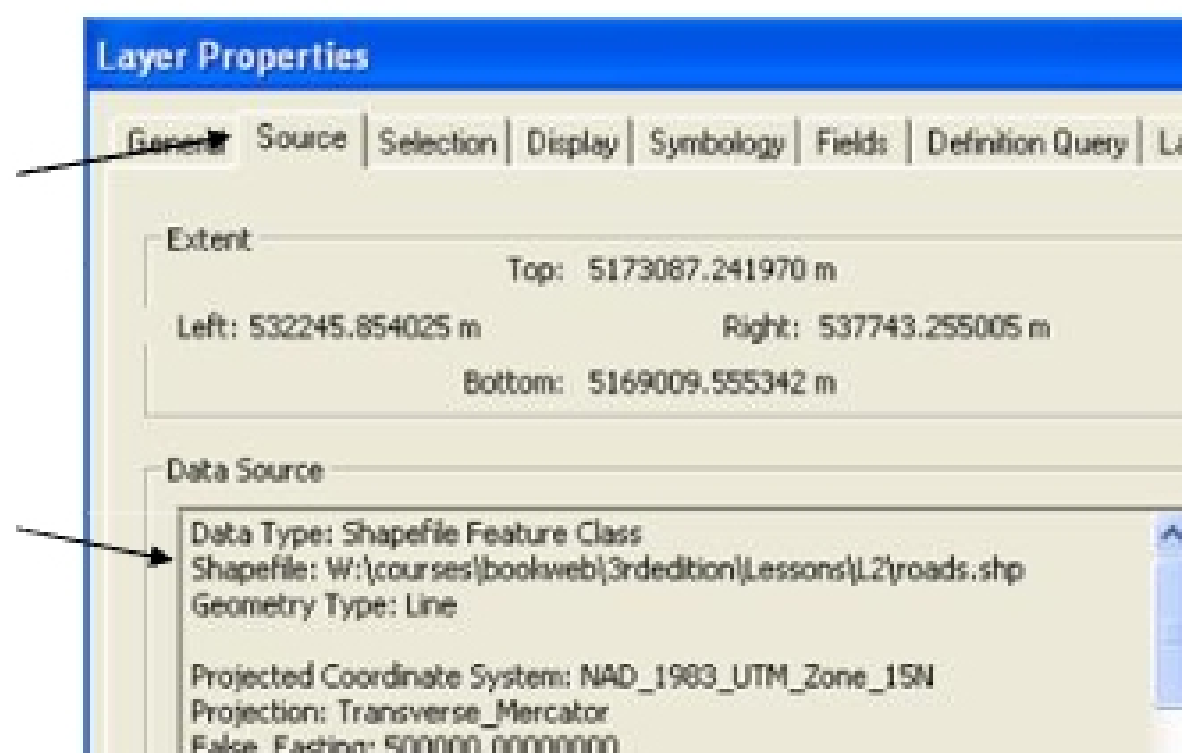
First, start ArcMap, and load the roads.shp data layer from the \L2 subdirectory.

Right click on the name roads in the table of contents window, and left click on Properties at the bottom of the drop-down menu (**Video:L2\_1\_Relative\_Paths.mov**)

Left click on the **Source** tab found near the upper right, and look in the window about mid-way down. Note that there is a path, starting with a drive letter, shown below as

"W:\courses\bookweb\3edition\Lessons\L2\roads.shp."

This path is the drive and sequence of subdirectories that lead to the displayed data file.



Yours will be different, depending on the drive and directory into which you've stored your files. This path is "hard-wired" to the data set, and the ArcMap project you've created knows to look there when you ask it to display this map.

Unfortunately, the map project isn't very smart. If you move your project files, including all data, to another computer, the drive letter or directory you save the data into will likely be different, for example, C:\ or E:\ or some other drive letter. In this case, the map project won't be able to find the data.

If anything is different in the path, the map project won't work. In other words, the map project isn't portable.

Perhaps worse, even if you don't move the data, but do something as simple as rename the directory, the map project won't work correctly.

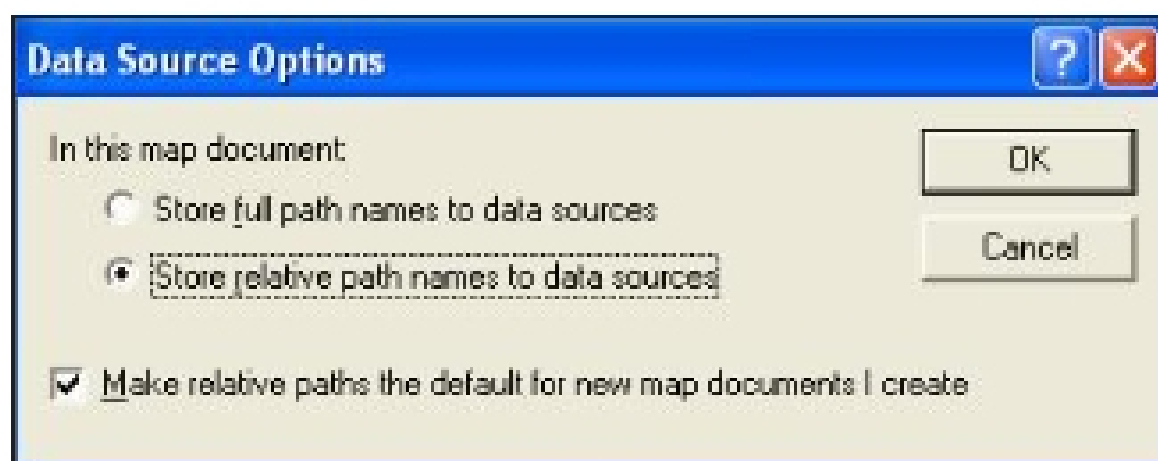
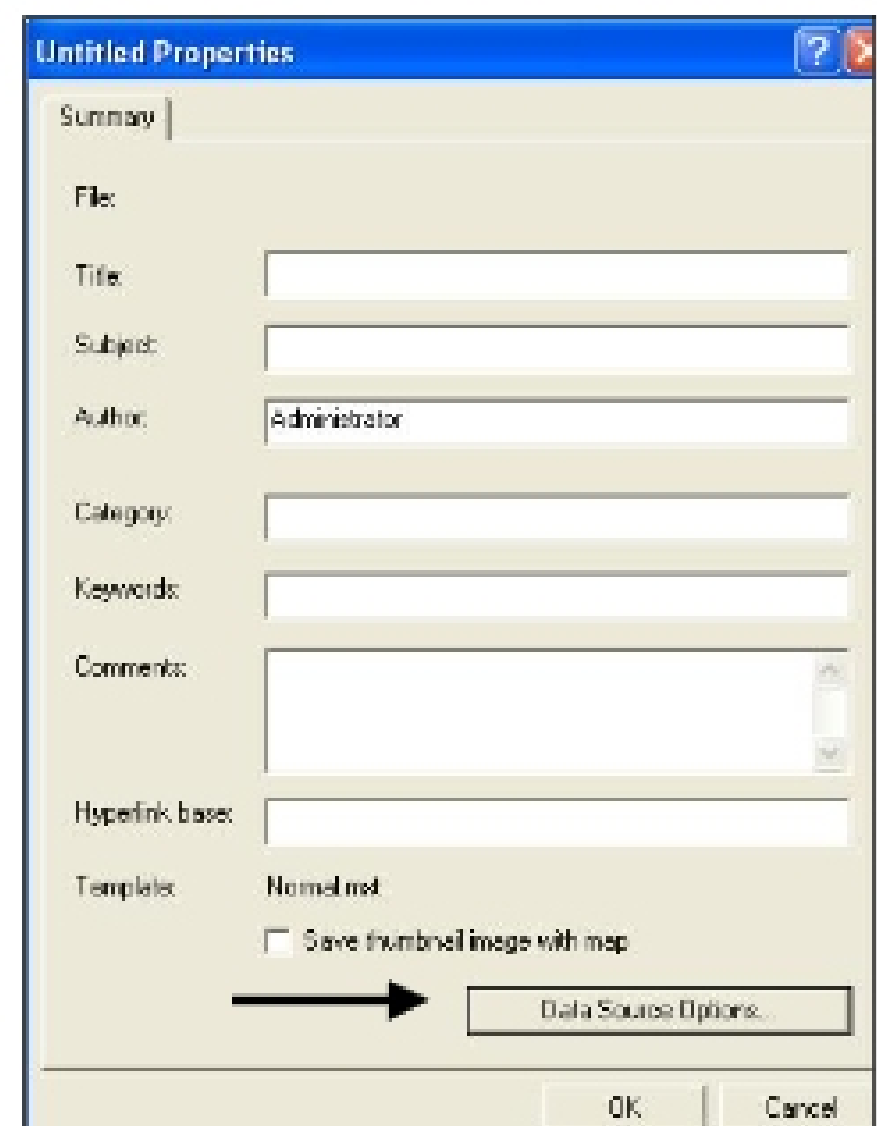
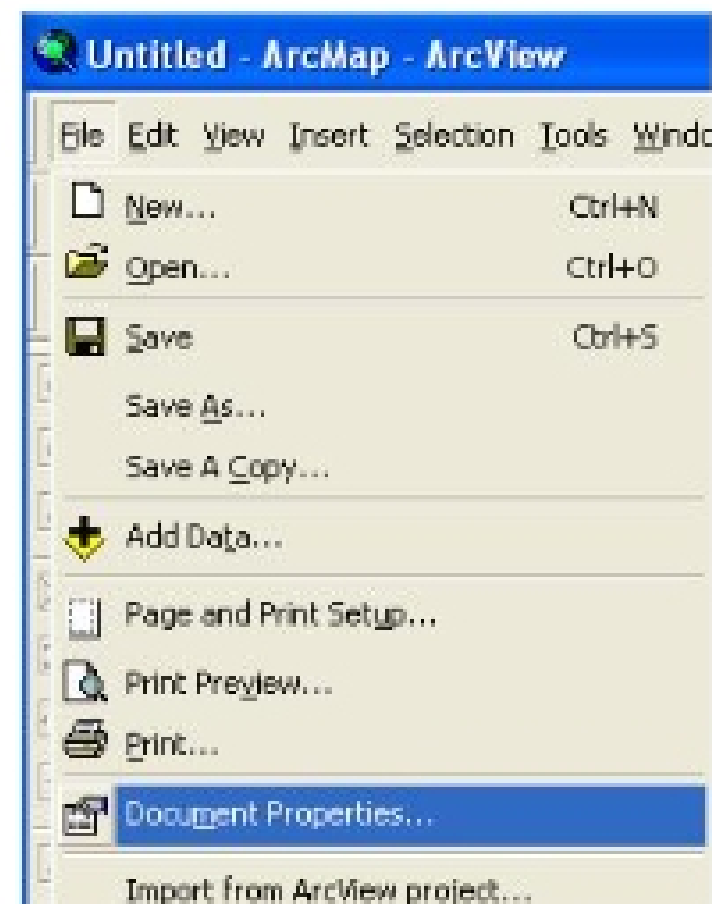
This isn't a problem if you always work on a computer with fixed drives, and you never change the subdirectories. But many folks want to move their data and projects around.

There is a fix. It is called making the path names relative. To do this, left click on **File & Document Properties** (see right),

This will open a window with several blank fields for a map title, subject, keyword, and others

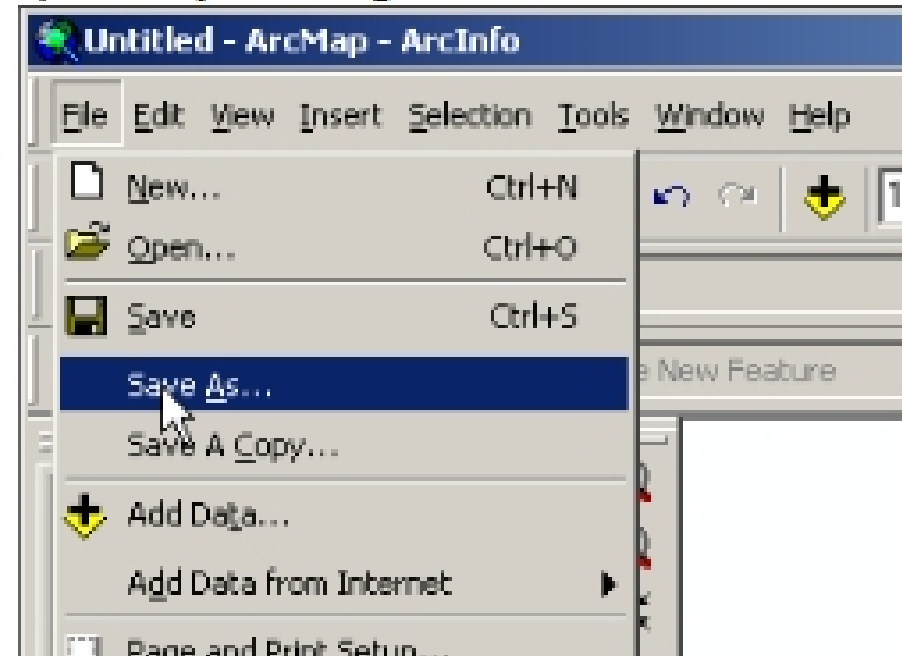
Left click on the button "Data Source Options", near the bottom.

Change the **Data Source Options** to "Store relative path names...", then OK and OK again. This will only store as much of a path as is needed to locate the data from the project




If you then save the map project in the same subdirectory as the data, you can easily move your project and all the data to a new computer by moving the entire subdirectory.

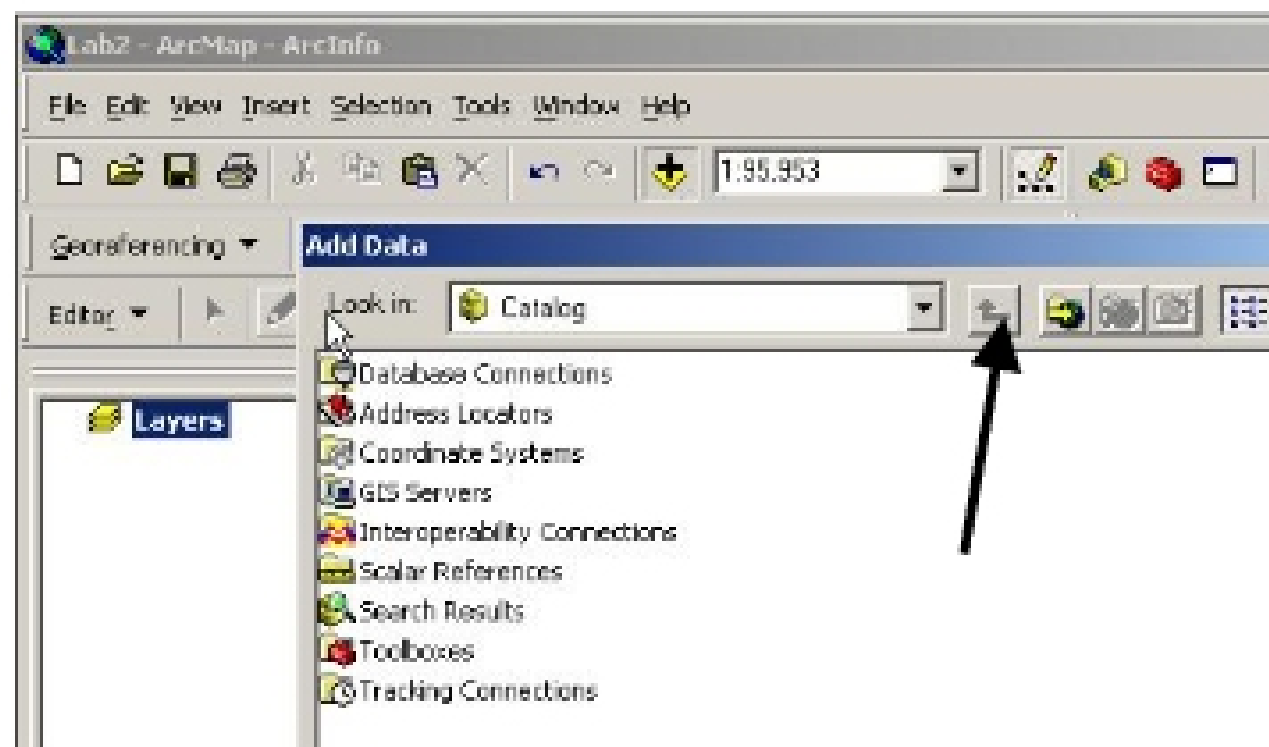
In this case, save your map project by File ➤ Save As and navigate to \L2 directory, naming your project appropriately (see figure to the right).



## Connecting to “New” Directories

You use the add data button, , to display files in ArcMap. However, sometimes a directory or drive does not appear in the list of sources.

You need to create a connection, using the **Connect to Folder** button, shown in the figure to the right.



This opens a list of available folders, at least those on your hard disk, and perhaps any additional available through your network. Navigate to the folder containing your data by clicking down the directory tree, and selecting the appropriate folder (shown at the right), in my case ... Lessons\L2. Clicking OK makes this folder available, so that you may add data from it to your map.

Add the following layers to your map:

- 40\_corners,
- Roads
- Streams
- Iverson\_drg

