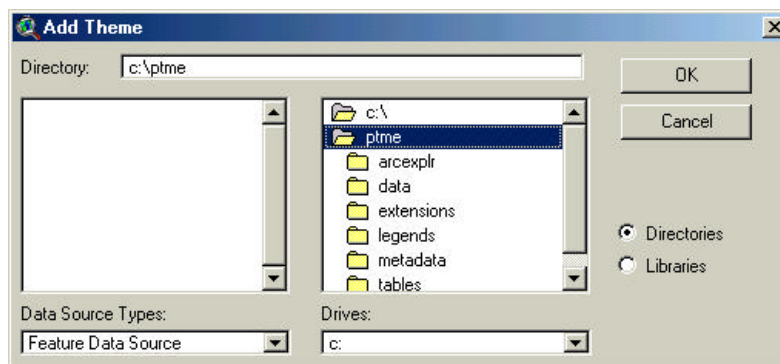# Lesson on How to Georeference a jpeg image for use in ArcView using Image Analysis

In order to do this lesson you will need to have ArcView Image Analysis on your machine. This tool will enable you to align an image to an area, such as the Lewis & Clark National Forest (jpeg) to the towns in Montana. I have placed a shapefile in this lesson called "mt_city.shp" that you will need to put in a place where you can later navigate to it for use in ArcView. You could use any source with similar attributes later but this one will give you practice using the alignment tool.
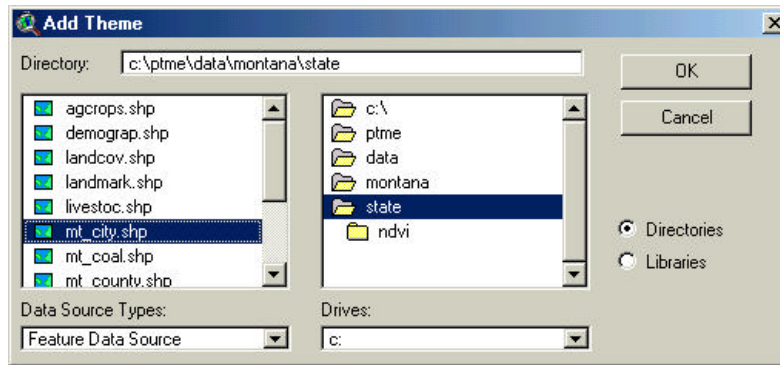
I have also placed a jpeg image in the folder that will need to be loaded into your lesson as well. Place this jpeg in a place where you will be able to find it later for loading into ArcView as a special image. The special image in this lesson is called "vicmap.jpg"

Open ArcView and add a theme

Go to the folder where you have located the "mt_city.shp" and add it as a feature. This is the file provided for this lesson that you put into ArcView. The directory example below is where I placed the shapefile. (Note that the theme is added as a feature)
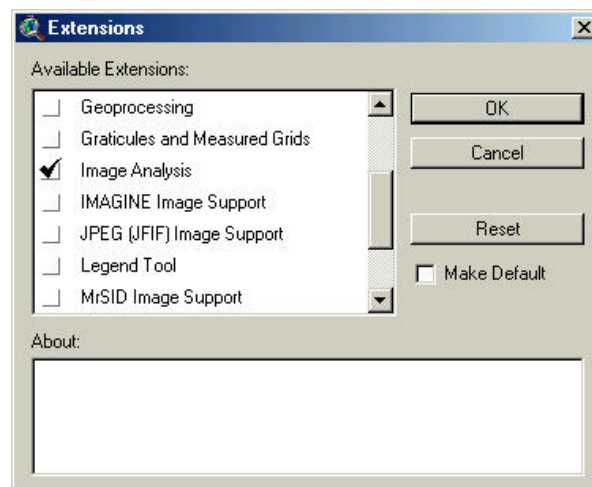

You should now have the following theme highlighted as shown in the next directory. The theme will say "mt_city.shp" and you now click the add button to place it in to your view.
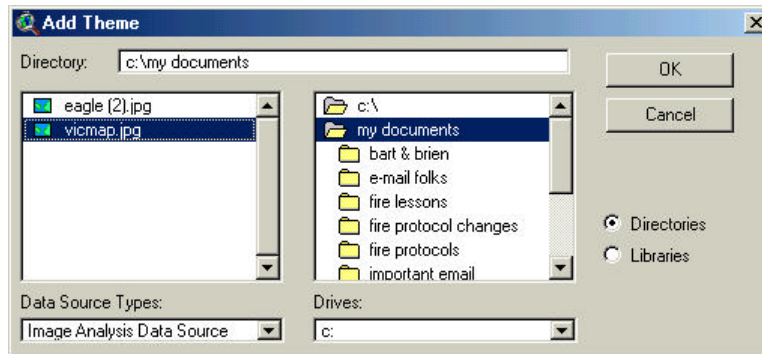
After you have the cities into your view you may now turn on the theme and a group of dots will appear. If you use the identify tool, you will note that each one is a town in Montana. These towns are all georeferenced but the image that you will now need to add to your view is not.

Your first maneuver will be adding an extension. You will first go to your menu bar and under "File" click on "Extensions" which will open a drop down list of extensions you may use. Check the "Image Analysis" box in the list of extensions. Be careful to check the Image Analysis and *not* IMAGINE Image Support. You may now close the extension box.
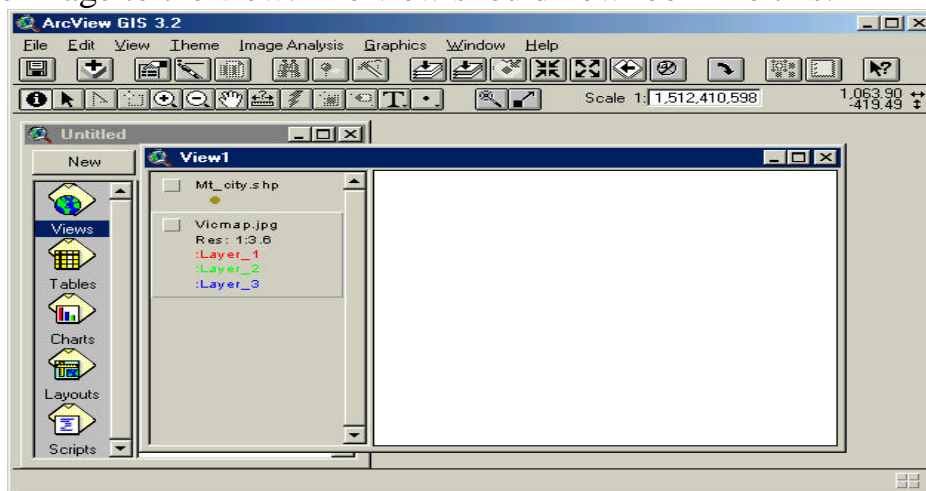

Add a Theme and navigate to your folder where you have the image "vicmap.jpg". The biggest problem now is to add the jpg as an "Image Analysis Data Source". This very important maneuver is accomplished by clicking on the drop down menu on the bottom left side of the "Add Theme" window. The drop down menu is called the "Data Source Type."

On the lower left in the drop down menu select "Image Analysis Data".

Add the image to the view. The view should now look like this:

The cities theme needs to be your top theme in the view. Now make the image theme ("vicmap.jpg") active. Turn on the image theme.

When the image theme is active, you must select the alignment tool in the bottom bar and click it to open the image into the view. The tool for alignment looks like this

You are now ready to begin aligning the map to the cities. To locate where a city is you will need to first make the cities theme active (click on the theme name) and then select the identify tool in the tool menu.

You will now locate a town in the shapefile that you wish to use as a reference for aligning the image. You will need to make a note as to the location of the town in the shapefile and then close the identify box.

Your next step is to click on the vicmap.jpg theme and make it active. When the vicmap.jpg theme is active, the alignment tool is now highlighted and you now click on it. This tool was shown earlier in this lesson.

The next move is very important in that you must follow a particular path in order to be successful in your alignment of the jpeg to the cities. You move from the point on the jpeg to the same spot in the cities shapefile. You do this by first making the vicmap.jpg theme active and clicking on the align tool. Now you click on the spot where the town is in the image, drag to the dot where that town is in the city shapefile, and click once at that point. The image will move, bringing the city to the selected spot on the map. **The path you follow is to click first on a point in the image, and click next on that same point in the shapefile.** You start at the point where you want the alignment to take place and maneuver the town into position on the map. You will follow the same process over and over until you are happy with you alignment. If you find that you do not like one of your moves simply click delete before you move on and it will undo that one move.

A quick review of the process of Alignment

1) Be sure to have your cities theme active and then use the identify tool to locate the city to which you will georeference the image.
2) Make your image theme active, then click on the align tool. Move from the point on the image to the same point in the shapefile.
3) When you have completed your project be sure to save the work where you can find it.

You now should be able to georeference a jpeg to themes like roads, towns, or other features you may wish to align to each other.