

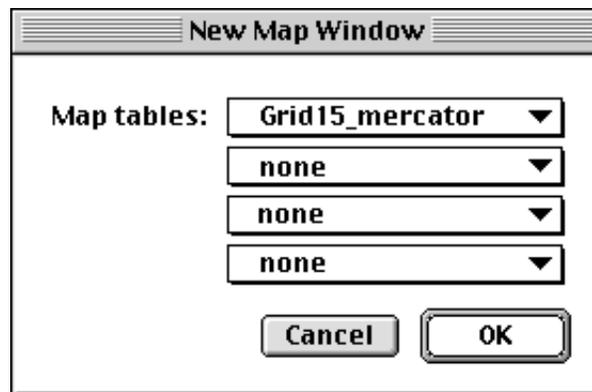
Geographic Information Systems & Sociological Geography

Mills College SOC128 Fall 1999 -- Dan Ryan

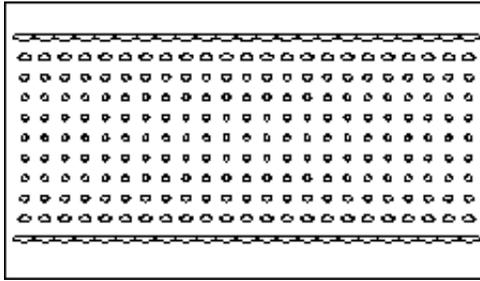
Projections and Scale (Read Kraak 81-87, Johnson pp 37-8. WWW [Map Projection](#) and [Coordinate System Overview](#).)

Projections

1. Open Mapinfo and the CLASSES server as usual and retrieve the folder F99Ex03. You may also want to open your folder on STUDENTS now too.
2. **Open the tables WORLD** in the Mapinfo folder (**hard drive:applications:mapinfo:sampleddata:world**) on your machine.
3. Next **open any four of the tables GRID 15** in the folders labeled [Mollweide](#), [Sinusoidal](#), [Mercator](#), [Millercylindrical](#), [Conformal Australia](#), [Equalarea Australia](#), [Equalarea India](#), or [Azimuthal Equidistant South Pole](#) in the F99Ex03 folder.
4. Close all the open map windows and then create four new map windows, each with one of the GRID 15 tables in it. Note that the order in which the layers are added to the map matters -- apparently the projection of the first layer sets the projection of the map. Experiment. Tile your windows.



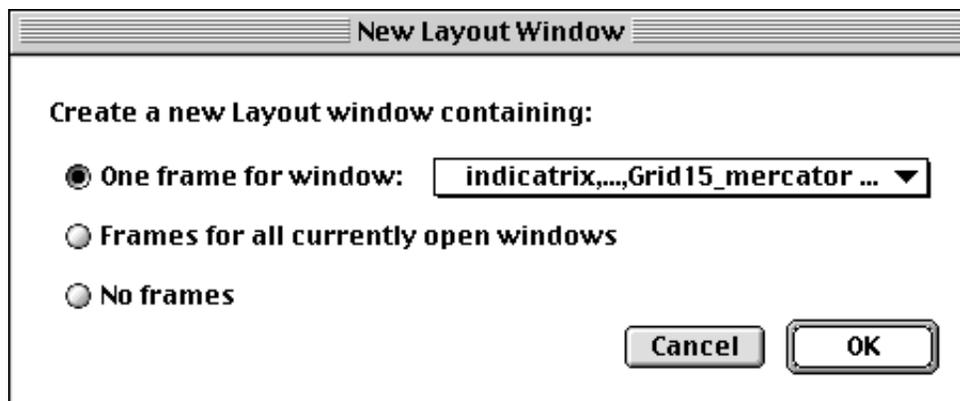
5. One by one, make the cosmetic layer editable and **add a title with the name of the projection** and then save this cosmetic layer to a table called TITLE in the appropriate subfolder in Exercise03.
6. **Open the table INDICATRIX** in Exercise03. This is a layer containing approximately 250 circles of radius 150 miles, each centered on intersections of the 15 degree parallels and meridians. It should add itself to one of the map windows. Add it to the others by making them the active window, clicking on **layer control** and then clicking on the **ADD** button. In layer control you can add any open table as a new layer in a map window. When you add INDICATRIX, make sure it is above or below the grid, as you think looks best. Repeat for all four maps.



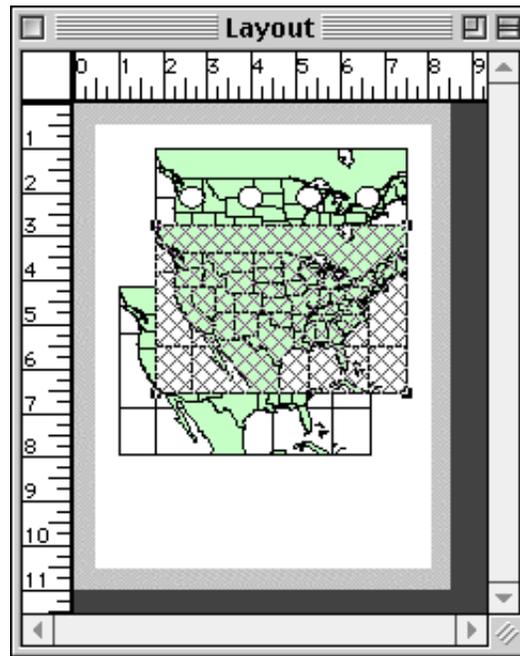
- Adjust each map window so it is filled with the map of the world. For each projection, note whether the circles are the same size all over the map and whether they are the same shape all over the map. A projection preserves areas (equal area), distance (equidistant) or angles (conformal), but never all of these at once. Be sure to look at a variety to get a sense for how the GIS automatically re-projects map data.

The Layout Window

- For producing attractive printouts, Mapinfo provides a layout window. You open a layout window by clicking on Window > New Layout Window. The layout window is a representation of the piece of paper onto which your map will be printed. When you create a new layout window, Mapinfo will ask whether you want "frames" for all the open windows. Usually you do.

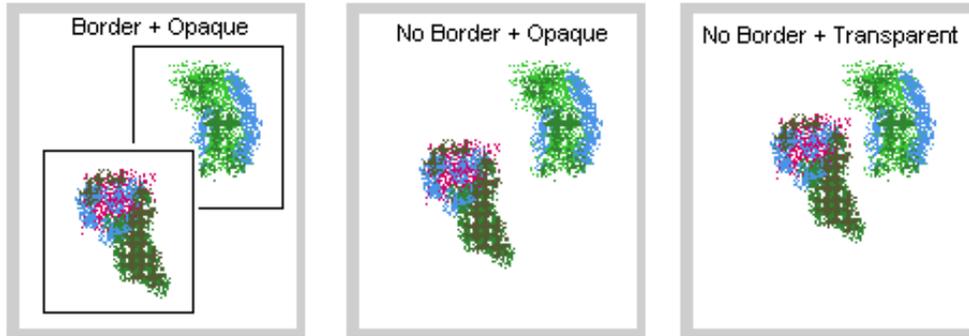


- A frame in the layout window "contains" whatever appears in an open map or browser or graph menu. You can move frames around, resize them, put them in front of or behind one another, etc. in the layout window. If you say "yes, give me a frame for each open window," you should have four frames in your layout window.



3. **FYI:** Double click on one of your frames. Frame objects have coordinates and scale relative to the printed page. You can also change the contents of a frame by selecting which currently open Mapinfo window (maps, browsers, graphs, legends) should appear in it.

4. Arrange them so that they make the best use of your blank page. Click and drag or use handles to resize.
5. You can opt to have a neatline around a frame or not. To remove the line, select the frame and go to **OPTIONS > REGION STYLE** and specify **NO BORDER**. You can also specify whether the frame should be transparent or opaque. Sometimes a map does not fill the full frame rectangle and you want to arrange frames on a layout without the corner of one cutting off another.



6. Arrange your frames like this, using the Text tool in the layout window to add the overall title and your name. To turn the paper you need to go into File > Page Setup.

