

Creating Map Books

ISTC Topic:

3.13

In this Chapter you will learn

- How to create map books with dynamic titles and an inset map that shows the extent of each page of the map book.

1. Map books

Map books are series of maps showing the same GIS layers for different extents. For example, many counties maintain map books for their parcels database where each map shows the parcel outlines and other relevant data for every township or section in their county. Setting up a separate map document for each township is very time consuming. Map books in ArcGIS allow you to automatically create many maps which you, for example, can export as a PDF document with many pages each contain a map for a slightly different extent.

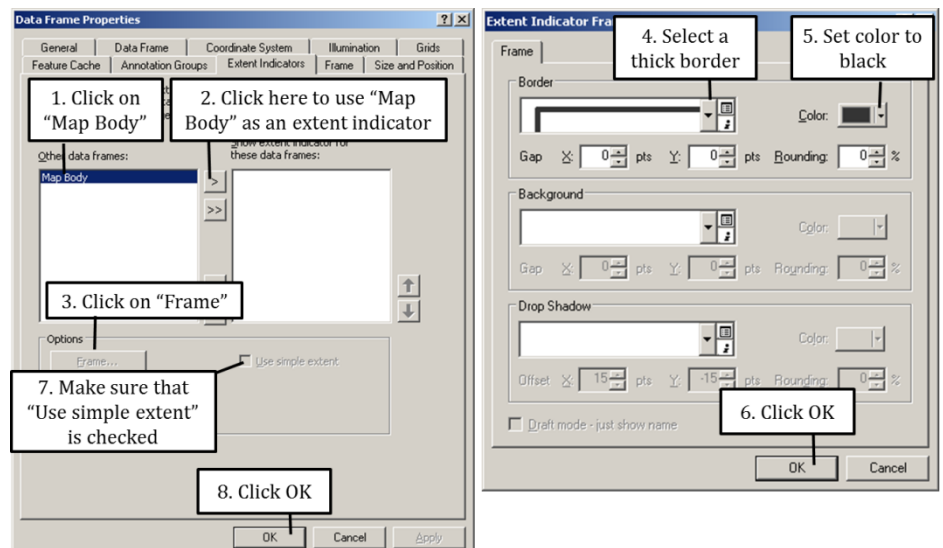


3.13: Creating a Map book

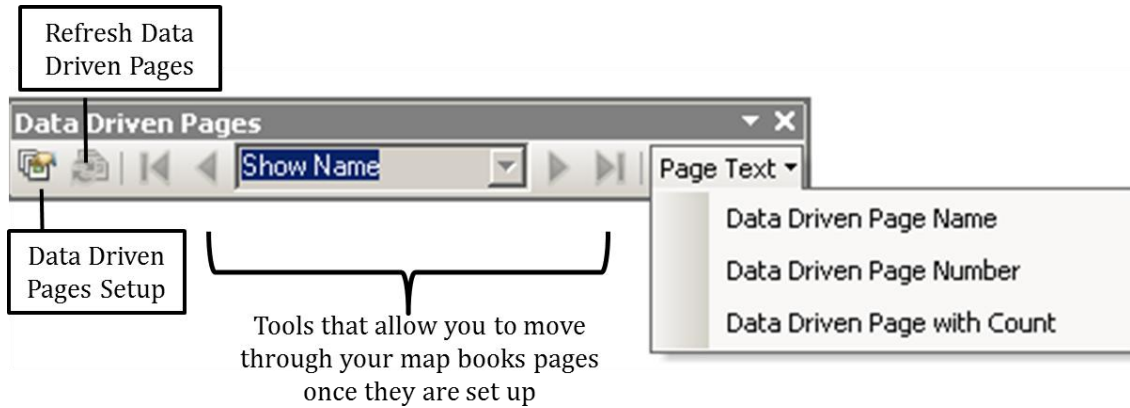
Exercise 1: Creating a map book showing different Counties in Idaho

1. In this exercise you will create a pdf document with 44 maps, each showing the outline of a different county in Idaho. Additionally, each map will have an inset map that shows a map of the entire state of Idaho and highlights the location of the county of interest on a given map.
2. Start ArcMap and open Exercise1.mxd. Switch to the layout tab and notice that this map contains two data frames. The map body data frame shows the extent of a county along with the cities inside this county while the inset map shows the entire state of Idaho.

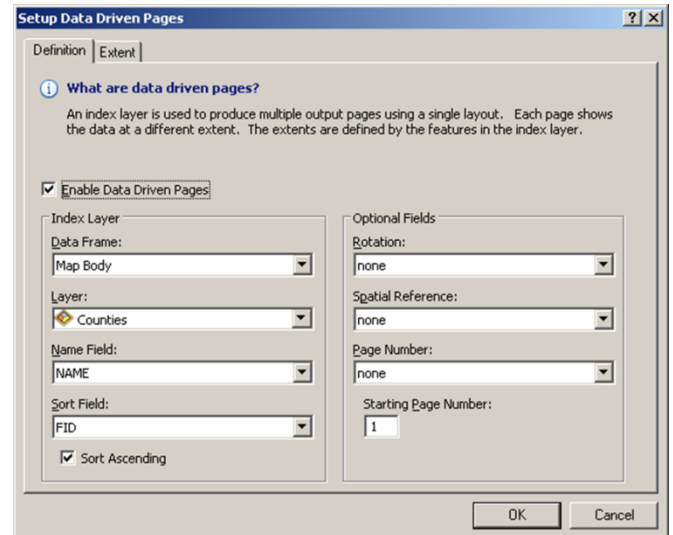
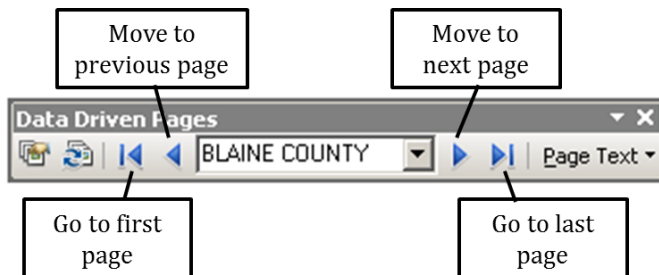
3. First we will add an extent indicator for the inset map that highlights the extent of the map body. Right-click on the words "Inset Map" to open the data frame properties. Go to the Extent Indicator tab and follow the instructions on the right.



4. While in the layout view pan to a different county in the map body and notice how the extent indicator box in the inset map moves accordingly.
5. Open the Data Driven Pages toolbar (Hint: click on “Customize” near the top of your screen and then click on Toolbars). This toolbar has the following buttons:

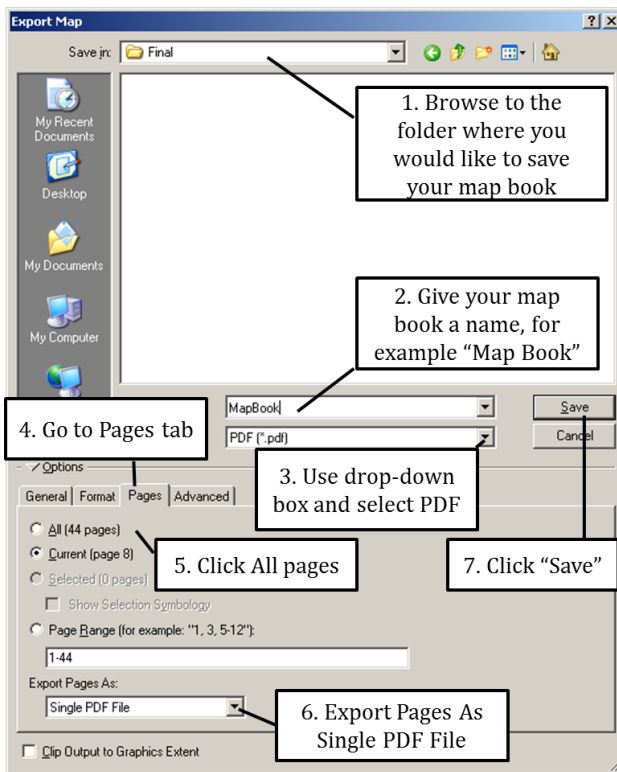
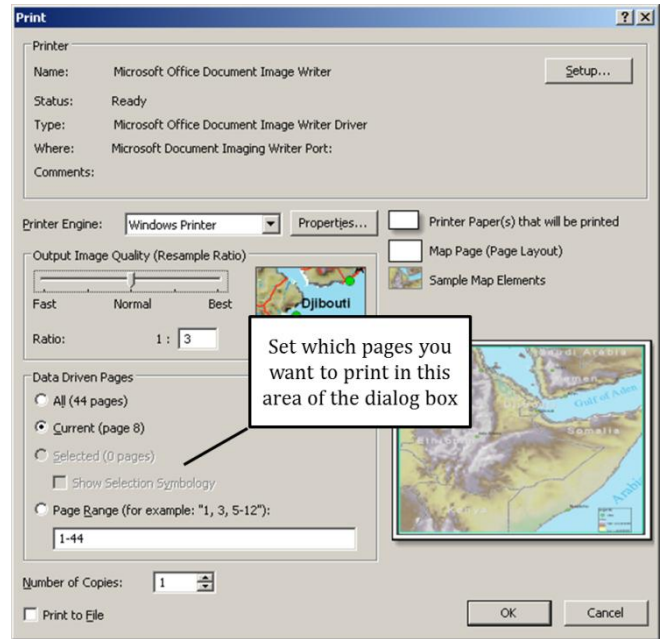


6. Click on the “Data Driven Pages Setup” button. Use the Counties layer in the Map Body data frame as the index layer. This means that you will create a separate page in your map book for each county. Pick NAME as the Name Field as shown on the right.



7. Use the Data Driven Pages toolbar to move back and forward through maps for the various counties. Note the extent indicator in the inset map as you move from county to county.
8. Click on Page Text > Data Driven Name Page on the Data Driven pages Toolbar to add the name of county that is in focus to your map layout.
9. Double-click on the newly inserted county name and increase the font size to 24 and place it in the top-right of your map. Again use the page forward and backward on your Data Driven Pages toolbar and notice that the county name changes accordingly.
10. Click on Page Text > Data Driven Page with Count. Double-click on the new text box to open its properties. Set the font size to 16 and move it to a white space on your map so you can see it better. Using the forward and backward buttons and your Data Driven Toolbar see how the page numbers change as you go from one county to another.

11. You can print your maps directly from ArcMap by clicking on File > Print as shown on the right. Only click "OK" if you are doing this tutorial and you have printer available to you. If you have a printer make sure that the printer name is correct (if not, go to File > Page and Print Setup to adjust the printer) and you have indicated correctly which pages you would like to print.
12. Alternatively, you can export your map book to a PDF file and print your maps from there. Click on File > Export Map.



13. Use the instructions on the left to export your map book as a multi-page PDF document. This is a good format to store, share and print your maps on an "as-needed" basis.
14. Save your map.



Exercise 2: Creating parcel maps for different townships in a county

1. Start ArcMap and open a new map document. Add the Parcel_Sample_Data layer as well as the PLSS_TR, PLSS_Sections, Roads, Counties and Cities.
2. Click on Insert from your main menu along the top of your screen and select Data Frame. Note the addition "New Data Frame" in bold letters at the bottom of your table of contents. This will be your inset map. If "New Data Frame" is not displayed in bold letters then right-click on "New Data Frame" now and select Activate. Click the Add Data button and add Selected_Cities and Selected_TR.shp from your intermediate folder.

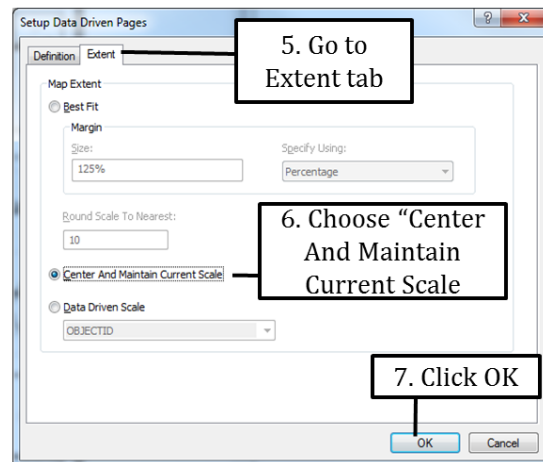
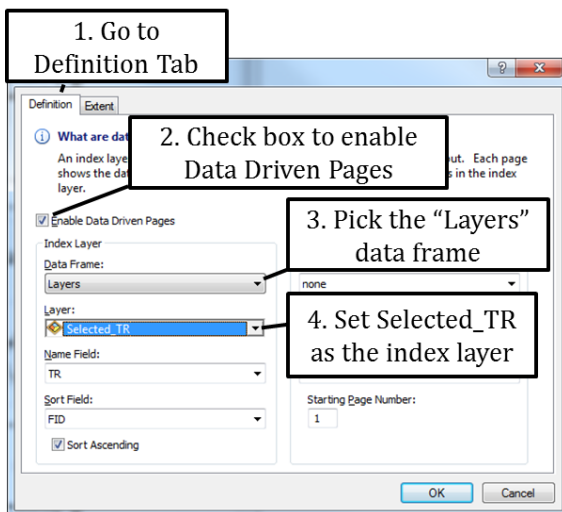
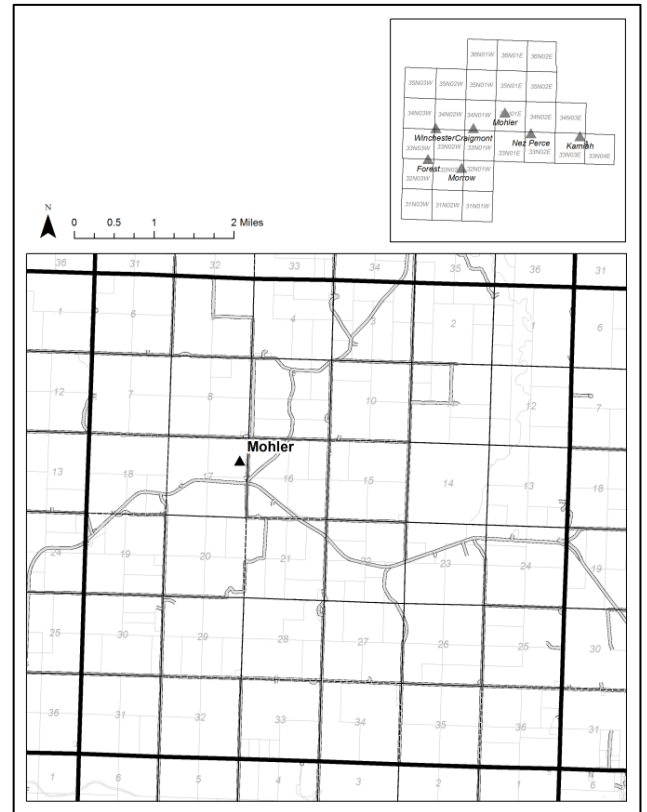
3. Go to your layout view and clean up your map by sizing the data frames on your page and symbolizing your various layers, for example as shown on the right where the inset map is shown in the top-right corner. Zoom the inset map to the extent of the Selected_TR.shp layer, and zoom your map body (tightly) to a single township.

4. Add a north arrow to your map. Then click on the main map to activate the "Layers" data frame (the data frame near the top of the table of contents) and add a scale bar.

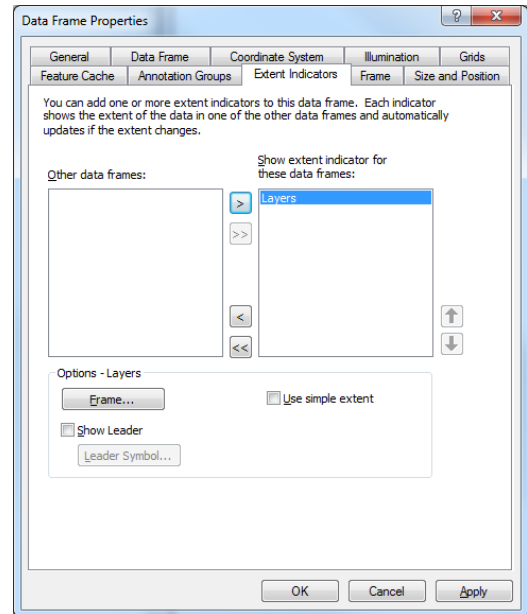
5. Label the roads using the FULLNAME field, and the Cities (in both data frames) using the CITY_NAME field. Adjust the size and font according to your own preference.

6. Note your scale. Do you want to preserve this scale across your entire map book? For consistency, and because townships do not vary greatly in size, we will keep our scale constant and set that up when we set up the data driven pages. Hint: we are not using annotation in this tutorial but if you are in your own maps this would be the time to make sure your annotation looks the right way and right size so it is readable. Refer to ISTC1.24 Exercise 4: Working with Annotation for more information.

7. Add the Data Driven Pages toolbar to your map and click on the Data Driven Pages Setup button. Use the figure below to set up your index layer and your extent.



8. Right-click on “New Data Frame” near the bottom of your table of contents and go open the properties.
9. Go to the Extent Indicators Tab as shown on the right and add “Layers” to the “Show extent indicator for these data frames” window. Make sure the “Use simple extent” check box is not checked. The default extent indicator is a red box. If you do not like that color click on the “Frame...” button and change the extent indicator symbol. Click OK
10. Save your map.



11. Finally add in a Data Driven Page Name and Data Driven Page with Count. An example is provided on the right hand side. Note that in this example the title consists of two objects: first, a simple text box with the text “Township:” followed by the Data Driven Page Name.
12. Export your map book as a Single PDF file that contains pages for all your townships.
13. (Optional) Create map books for densely populated areas using the PLSS_Sections.shp as an index layer. Start by selecting only those sections you wish to include in your map book and then create a map book.

