



**US PUBLIC LIBRARY GEOGRAPHIC DATABASE**  
**Preliminary Training Tool, Version 1.1**

**“Who are Your Customers?  
How Do You Reach Them?  
Planning with the Public Library Geographic  
Database”**

**West Virginia Library Association  
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### **The US Public Library Geographic Database (PLGDB)— How to Mine and Map the Data**

The PLGDB is now in the second year of development. The database includes the locations of 16,000 public libraries mapped at the 1999 geographic location, data sets from the US Census 2000, and library use statistics from the National Center for Educational Statistics. The goal remains to provide consolidated information on public libraries nationwide, easily accessible over the Internet. The two year project was sponsored by the Institute of Museum and Library Services ([www.ims.gov](http://www.ims.gov).) The Florida State University's School of Information Studies, Information Institute, ([www.ii.fsu.edu](http://www.ii.fsu.edu)) partnered with GeoLib on this project.

The PLGDB is designed to offer public library decision makers access to data that can shape local, regional and national library policies.

Attached are worksheets which will allow you to discover some of the tools and data within the PLGDB. We need your ideas and feedback to continue to develop optimal use of the PLGDB. Our mailing address is on the last page. We will use your insights and feedback to develop the database and help tools.

You can contact me, of course, at [ckoontz@admin.fsu.edu](mailto:ckoontz@admin.fsu.edu), with any questions. Thank you for your continued support. Below are some publications which will be out soon!





Christie Koontz  
Director

**FIRST: Get an overview of all the data, tools, tabs and features of the PLGDB.**

Read through the AVI script which is newly developed for the enhanced version of the PLGDB. The script currently on the site is the older version. You are helping us pre-test this one. Look at the screen <http://www.geolib.org/PLGDB.cfm> and click on GO TO THE MAP, and review each of the tabs, tools and icons. (See Appendix A.)

NOTE: There are issues that arise when using Netscape—we are working to resolve as many of these as possible.

### **Exercise One: Finding a library of your choice in a familiar geographical area.**


1. Go to. <http://www.geolib.org/PLGDB.cfm> and click on GO TO THE MAP. ON the next page that will appear, click on LAUNCH MAP VIEWER.
2. Think of an area of the U.S. that you know well geographically—perhaps your hometown BRANCH library where you grew up. For example, San Marco Branch, Jacksonville Public Library System, Duval County, Florida.
3. Click on the **QUICKSEARCH**  tool to display a new pop-up window. Access the pull-down menu of U.S. States by clicking on the down arrow to select the state of interest. If desired, you can also choose to limit your search to central or branch library or to a specific library name or county. A new window will pop up showing the libraries that meet your search criterion. (In Netscape the map is behind the window.) Click on ZOOM and you should find yourself viewing the map of your selected library. Click the two windows closed so you have a full view of the map.
4. Alternatively you can select the **LOCATE**  tab, and type in the city/state name where the library is located OR the zip code.<sup>1</sup> As you are familiar with the geography, you can use the Pan TOOL  to travel in any direction on the map to your desired location.
5. A more labor intensive navigation method is to use the zoom button  to move through the national map to the area of your choice, continuing to pan and zoom until you identify the library of your choice. (This is the last resort, but possible!)






Now that you have located a library in an area of geography you are familiar with, you can fully explore the potential of what the database can offer you in the way of information and decision support.

### **Exercise Two: Interacting with the Active Layer**

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<sup>1</sup> Currently the zip code option only works if a library is located in the selected zip code. This is under development.

Now that you are viewing the map of your library and the area in which it resides, go back and click on some layers of interest to you. Click on the Layer tab , and you should see a Map Layer interface on the right of your screen. You will be viewing the information folder on the right of your screen.



1. If you click on the  next to a map layer—the contents will become the active layer. The check  beside it turns it off and on visibly. Click on the  and  next to the Branch Library box. The screen should refresh, and all the branch libraries and their names will appear.
2. Click on the TOOL . Now click on your branch on the map. A data window should pop up with the FSCS branch data. (In Netscape the data does not appear at times.)
3. If you click on  this icon beside a layer which is  or  and , you can see the legend in the information panel.


**ONLY ONE LAYER CAN BE ACTIVE.** That means you can only interact with one layer at a time. You may SEE other data layers, such as congressional lines and libraries, but you will only see one set of thematic population data at a time.<sup>2</sup>

### **Exercise Three: Getting data about your library area**

1. From the map layers, select population characteristics for your next data layer that you wish to be active. Click on the yellow folder to the left of 'population' . The folder should now look like this . The folder will open to show the total population layer.
2. Now click the box , and click on  next to the folder. You should now see population data on the map for your library area. (This is the same process for any other data layer.)



### **Exercise Four: Creating/identifying geographic market area**





Next you must define your geographic area for data extraction. At present there are two ways to define geographic market areas: create your own with the **Select TOOL** , or use the **Select by Radius TOOL**  to identify an area of up to 15 miles around your library of choice, or any other point. The caveat is that even when a portion of a **block group** is selected—you receive all the population in that block group.

1. Click on the **Select TOOL** . Next you will click on the point at which you wish to begin drawing the geographic area, dragging the mouse and releasing. The right box will



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<sup>2</sup> The layers which can be viewed thematically are population characteristics. When a population layer is CHECKED and it is the layer visible on the map. The “i” when clicked upon and made dark blue is the ACTIVE LAYER. There is only one active layer at a time.

then be labeled “Selection Set.” One of the options under Reporting is to “Execute report for this set.” Click on this option and the data for the map features of the active layer within the defined geographic extent pop up in a new window. You can zoom to one of the map features (i.e., a specific block group in this example) by clicking on “Zoom to this feature” in the new pop-up window. You can also click on the export button  in the top left corner of the data table, and download the data  to your local computer.<sup>3</sup> (See below for more information about the export feature.)

2. To use the **Select by radius TOOL** , first click on the select by radius button. A window will appear in the information folder to the right, and you will identify how large you desire the radius to be (ranging between .5 miles or up to 15 miles.) Then click on a point at which you wish to draw a radius. For this exercise, make sure you click on the  and  next to the total population box, otherwise you will only see Central Library data. The data results will pop up in a window to the left of the screen. There will be an export button  at the top left of the report window which you may click, and download the results  onto your own desktop spreadsheet.

### **Exercise Five: Exporting Data from the PLGDBD<sup>4</sup>**

All data tables should have a Table View  button in the upper left corner of the pop up window to format the data for a table (while in ‘Table View’). Each should also have an Export  button to the left of the data table, while in ‘Table View’ to export this data to your desktop spreadsheet. For example, you could use the population figures for your estimated geographic market area for Branch ‘A,’ in conjunction with your own branch use figures.

#### **THE PLGDB ONLY HAS LIBRARY USE FIGURES AT THE *SYSTEM LEVEL*.**






1. First, repeat the Creating/Identifying Geographic Market Areas if necessary and bring up the data table with a Table View button in the upper left-hand corner of the window.
2. Click on the Table View button in the upper left-hand corner of the window.
3. The window will change to a new view with the option to export the result set at the bottom of the listing of the results. If you wish to export the data in a format that is readable by Microsoft Excel, click on the Microsoft Excel icon just to the right of the word “Export” and follow the instructions for the File Download.
4. Alternatively, if you do have access to or do not wish to use Microsoft Excel, you can click on the “Go” button instead of the “Export” button and you will be presented with a new display in the same window that shows a Microsoft Excel icon besides a toolbox icon. The toolbox icon allows you to specify an ASCII-delimited file that can be downloaded to your computer.

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<sup>3</sup> The block group identification numbers are being added onto the map, as well as into the data results table, so when you ‘zoom to feature’ you know exactly which geographic area you are in, identify its relevant data

<sup>4</sup> This function is also under development. Please use, and comment on its utility for your decision-making.

### Exercise Six: Marking Up, Sending, and Printing Your Personalized Map

1. Click the Markup TOOL , and then click on the point on the map you wish to mark with text.
2. Next click on the Text TOOL  and then click on the new star on the map. A text box will come up in the information folder. Write what you desire, i.e., “New Site,” or “New Branch.” This will appear on you map.
3. You can use the Clear Selection TOOL  to delete the Markup and Text.
4. Email your map by clicking on the Email TOOL .
5. The Print PDF tab  allows you to print a copy of a map and also create your own title for the map.

### Exercise Seven: Review of PLGDB Feedback Mechanism

1. Please click on upper left ‘Feedback’ link (light blue type under ‘About’ tab) and send us comments on the PLGDB. The drop down menus will guide your feedback so we can process and analyze it better. Please select whether your feedback is about:

**Layout:** The organization and ease of use of the map information

**Functions:** The adequacy of the icons and tools for tasks

**Data Accuracy:** Library locations or other data

**Enhancements:** New features or data desired

**Other:**

### Exercise Eight: What are Your Data Needs

Organization \_\_\_\_\_ Contact Person \_\_\_\_\_

Email Address \_\_\_\_\_

Please be liberal in your responses to the following questions. We will use these responses to improve the PLGDB for all users.

1. What data do you need that is NOT in the PLGDB?

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2. What data is in the PLGDB that is not adequate for your needs, but would be if enhanced (accuracy, timeliness, more detailed, etc.)?

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3. If you were redesigning the PLGDB, what would you prioritize? (Please number from 1 on, with the number 1 indicating top priority, 2 indicating second priority, and so forth.)

\_\_\_ Layout: The organization and ease of use of the map information

\_\_\_ Functions: The adequacy of the icons and tools for task

\_\_\_ Data Accuracy: Library locations or other data

\_\_\_ Enhancements: New features or data desired

\_\_\_ Other (please specify):

4. How often would you like to see census data updated? Please prioritize by marking with an **x**.

	<b>This census data should be updated:</b>			<b>This data is not important library decision-making</b>
	<b>Every 5 years</b>	<b>Every 10 years</b>	<b>Every 20 years</b>	
<b>Population</b>				
<b>Race/Ethnicity</b>				
<b>Sex by Age</b>				
<b>Children Under 18</b>				
<b>Age/Language Spoken at Home</b>				
<b>Language by Linguistic Isolation</b>				
<b>Travel Time to Work</b>				
<b>Education Level</b>				
<b>Median Income</b>				
<b>Social Security Income</b>				
<b>Public Assistance Income</b>				
<b>Per Capita Income</b>				
<b>Poverty Status by Age</b>				
<b>Owner or Renter Status</b>				
<b>Number of Vehicles Available</b>				

Please identify and discuss any other census data NOT currently in the PLGDB that you would like to see included:

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5. How often would you prefer the library use data be updated? Please prioritize by marking with an x.

	Every year	Every 2 years	Every 5 years	Every 10 years
<b>Library locations</b>				
<b>Library use data</b>				
<b>Library input data</b>				

Please identify and discuss any other library data NOT currently in the PLGDB that you would like to see included:

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6. The PLGDB has capability to search by county and census tract. Would you like these to be implemented, and in what priority (1 first; 2 second.)

County                    yes\_\_\_\_\_ no\_\_\_\_\_ (1,2)\_\_\_\_\_

Census tract            yes\_\_\_\_\_ no\_\_\_\_\_ (1,2)\_\_\_\_\_

7. What library data would you like to be able to access, to compare amongst and between libraries? Please list below:

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8. What type of case studies would be most useful for your work? Such as assessing impact of LSTA funds in your state, by library type, user population, funding level, etc.

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9. Other helpful comments, please?

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Please mail **Exercise Eight** responses to **Dr. Christie M. Koontz, GeoLib Program, C2200 University Center, Florida State University, Tallahassee, FL 32306, by 12/19.**

**APPENDIX A**  
**AVI text updates the version currently on the website**

## GEOLIB PUBLIC LIBRARY GEOGRAPHIC DATABASE – TUTORIAL 2/2004

### 1. INTRODUCTION

Welcome to the National Public Library Geographic Database (PLGDB) and Florida State University's GeoLib Program. The PLGDB is an interactive database map that includes the location and other information for over 16,000 public libraries, data sets from the US Census describing people in the library communities, and library use statistics from the National Center for Educational Statistics (NCES).

This is an Internet map--Internet maps have much in common with traditional paper maps, with a few important differences. This tutorial will show you how to use the interactive PLGDB Internet based map.

After completion you should be able to use the PLGDB successfully; even if you have no prior experience. The basic tutorial will provide you with the background required to successfully navigate the maps.

### 2. TOOLS

This is an introduction to the **TOOLS**. Tools are used to perform an action on the map. You must click on the map, to activate these tools.

#### **Zoom in**

With this tool you are able to get a more detailed view of a smaller section of the map by clicking on a location or by dragging a box to define a particular portion of the map.

#### **Zoom out**

To zoom out on a map, define the center of the area that you wish to zoom out of by clicking on that location.

#### **Zoom to full extent**

This tool allows you to view the entire area the map covers. For this project the full extent of the map is the United States, which is displayed when the viewer is launched for the first time.

#### **Zoom to previous map**

This tool allows you to jump back to the map area displayed in your previous map screen.

#### **Pan**


The pan tool allows you to move around the map without zooming in or out. To pan, click and hold down the left mouse button on a portion of the map. If you now drag the mouse, the map area displayed will move until you release the left button mouse.

## Identify

The identify button allows you to click on a library and see detailed information about the library, such as name, location and library use statistics. A layer must be active in order to see its attributes.

## Select

The select tool allows you to draw your own boundaries around any point, e.g., you particular library. You draw the geographic area with the select tool with either a point, a line, or a polygon. The select tool displays the data for the map features of the active layer within the defined geographic extent.

The data for the map features of the active layer within the defined geographic extent pop up in a new window. You can zoom to one of the map features using the new window. You can also click on the export button  and download the data to your local computer.

## Select by Radius

The select by radius tool allows you to click on a location on the map and then specify a radius around that point. Data for the active layer contained in the specified radius will be displayed. The data will be summed at the bottom of the column.

## Measuring distance

This handy tool will let you measure any distance between two points. Just click on the beginning, the next place, and continue. It will tabulate the total distance. We are working on changing the measure from meters --to miles!


## Markups


Markups are ways you can actually draw and write on the map temporarily for your own use. When you refresh the map the marks will disappear.

The **Clear Selection** tool  clears selected features, added text, and graphics.

The graphical **Markup** tool  allows you to mark points on the map.

The **Text Markup** tool  allows you to add text directly to the map.

The **XY Location** markup tool  marks the latitude and longitude coordinates for a particular map location.


The **Grid Markup** tool  places a grid on the map. This grid covers the extent of your current map extent.

## Email

Use the email map function to email a JPG of your current map view, including any markups.

### 3. TABS

The tabs currently provide additional information about navigating within the map and expand the user's choices for available data.

The **Layers**  tab is a list of the available data sets for the map and is displayed in the Information panel. Each layer is a data set. In general, each set of map features associated with each checkbox (e.g., branch library, total population, is a layer.) Any information can be represented in a layer.

#### **Layers** (*Layers On and Off*)



Available data is displayed in layers. Any combination of layers can be turned on at one time. To turn layers on, click on the checkbox next to the layer name. To turn a layer off, click the checkbox again.

There may be several data layers within a single folder. Click on a folder in the data list to see the data layers available in that folder. To turn on all data layers in a folder, click on the colored square next to the folder name. To turn off all data layers in a folder, click on the gray square next to the folder name.


#### **Availability \***


Some layers are only available at a given scale. The identify icon next to the layer name shows when a layer is available. The icon is light blue when a layer is available and gray when it is not available. Clicking the red asterisk next to the name of a data layer that is not available will zoom the map to the scale at which the layer is available.

#### **Active Layer**

No matter how many layers (data sets) are displayed, there is only one active layer. The identify button will only display information about an active layer. To make a layer active, a click on its identify icon will turn it from light blue (inactive)  to dark blue (active) .

#### **Viewing the Data for a Data Layer**

Click on the Identify tool  on the menu at the top of the map. If the desired data layer is not active click on the Identify icon following the data layer name to make the layer active (i.e., turn the icon to dark blue.) Click a feature on the map. A new window will open containing the data for the active data layer for that location.

If a window doesn't open, check to make sure that there is data for the active layer at that location. You can also use Select by Radius .

The **Quick Search** [Quick Search](#) tab offers you access to a list of libraries by state, county, or name. The list will appear in a new window. Choose a library from the list and click on Zoom to locate the library on the map.

**Locate** [Locate](#) offers you the ability to search by zip code<sup>5</sup> OR city and state.

**Get Data** [Get Data](#) gives instructions for how to access the data available in the map layers.

**Legend** [Legend](#) displays the current map legend in the Information panel. The map legend shows you the symbology of the layers.

**Print PDF** [Print PDF](#) initiates the print PDF process. You must specify the map title and paper size before you generate the PDF map.

**Bookmarks** [Bookmark](#) can be from a previous session. You can define your own personal bookmarks if your web browser accepts cookies.

**Key Map** [Key Map](#) identifies where you are on the map. It is a way of navigating the map without using the pan tool.

**Metadata** [Metadata](#) is information about the content, quality, condition and other characteristics of data. We have metadata for library entities and outlets, US Census data, library use data and for non-library geographic features such as state lines, rivers and roads etc.

**Glossary** [Glossary](#)

There are four glossaries in the database. There is a glossary for

#### 1. LANGUAGE USED ASSOCIATED WITH GEOGRAPHIC INFORMATION SYSTEMS (GIS) AND RELATED MAPPING

It is a dictionary of some selected GIS terms.

#### 2. GLOSSARY FOR LANGUAGE USED IN THE POPULATION CHARACTERISTICS LAYER

More detail is provided in the US Census Bureau's glossary of terms. Terms in the glossary include age, education level, ability to speak English, linguistic isolation, etc.

#### 3. GLOSSARY FOR LANGUAGE USED IN THE GEOGRAPHIC BOUNDARY LAYER

Some of these terms are also in the US Census glossary. Others are included for the user's convenience from various sources. These include concepts that may be new to non-map

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<sup>5</sup> Currently, the zip code search only works if a library happens to be in that zip code.

users such as **basemap**, which is a map including geographic, physical, cultural, political, and statistical features for locational reference, or census geography such as **block**, **block groups**, and **census tracts**. A block group is up to 1000 people, and a census tract ranges from 4000 to 8000 individuals.

#### 4. GLOSSARY USED FOR LANGUAGE IN THE LIBRARY USE DATA IN THE LIBRARY LAYER

The library use data is extracted from the Federal State Cooperative System (FSCS) data of the NCES. Refer to the 'metadata' tab for more information. Such definitions include administrative entity and outlet, or types of use, and even the definition of a library.

**Coming Soon** Coming Soon

This tab lists new data and map activities that will be incorporated such as more census data, expanded searching, more detailed library information including ranking of libraries by population, case studies to help you envision uses, and additional datasets such as school locations.

**Help** Help

This help area will take you to a generic tutorial which explains internet mapping and geographic information system software—which is recommended for those who are interested in learning more about the underlying technology and to our PowerPoint and this AVI tutorial.

**'Feedback' (located in upper right corner under 'About' tab)**

A key ingredient to the long-term success of this database is the ongoing incorporation of other relevant data. We need your feedback as to what data you would like to have in the future, as well as any problems you have using the PLGDB site. Please click on the feedback tab to comment on four areas including ease of use, adequacy of tools for what you are doing, accuracy of data, and what new data or features you need.

#### 4. Basic Internet Mapping Information

First, we'll cover two basic concepts you need to know. Then we'll introduce you to the tools and methods that you'll use to navigate around the map, and ask it questions.

Imagine your library. How would you keep track of and communicate information about your library to other people who need to know all about it? You might use a database to keep track of the street addresses, the types of use, budget and other attributes that are important. Your library is one **record** in a **database**. We call each category (for example, a library address) a **field**.

We mapped the location of each library and identified which attributes belong to each library. This is the foundation of geographic information system (GIS) software, which is the software that helped build the PLGDB. A GIS tells us *where* something is and *what* it is. Computers are synonymous with GIS, and using a computer we can have hundreds of fields (different attributes) for thousands of records (libraries).

We can also have other **layers** of information in our GIS. Our information on libraries would constitute one layer of information. We could also have a layer with the characteristics of people who use libraries, such as their age, income, education level and what language they speak. Any information can be represented as a layer.

A map represents the landscape in an artificial way. A point is good for representing information in which it is necessary to show where a feature is, but its physical shape is not important (i.e. the location of a library.)

**Lines:** A line is suitable to represent many real world features (i.e. the roads that lead to the library.)

**Polygons:** When you see a polygon, remember that everything inside the boundary has the attributes associated with the record. (i.e. a market area you draw around a library will have library addresses and the characteristics of people who use libraries.)

You might hear people talk about *coverages*, *themes*, or *shapefiles*. All these terms are other names for **layers** of information.

With individual layers we can conduct analysis between layers and only display layers of interest. For example, in one environment, you can see library use statistics, the characteristics of people who use the library, and the distance between libraries.

As you work with these maps you will be able to turn different layers on and off as you desire.

## **Publications**

Koontz, C., Jue, D.K., C. R. McClure, & J. C. Bertot. (2004). The public library geographic database: what can it do for your library? Public Libraries, 42, 2, pp. 49 – 54.

Koontz, C. & Jue, D.K. (2004). Customer data 24/7 aids library planning and decision making. Florida Libraries, 47, 2, pp, 17-19.

Koontz, C. & Jue, D.K. (2004). Solving the demographics conundrum. Library Journal v. 129.