Visualize Db2 spatial data with Esri ArcGI

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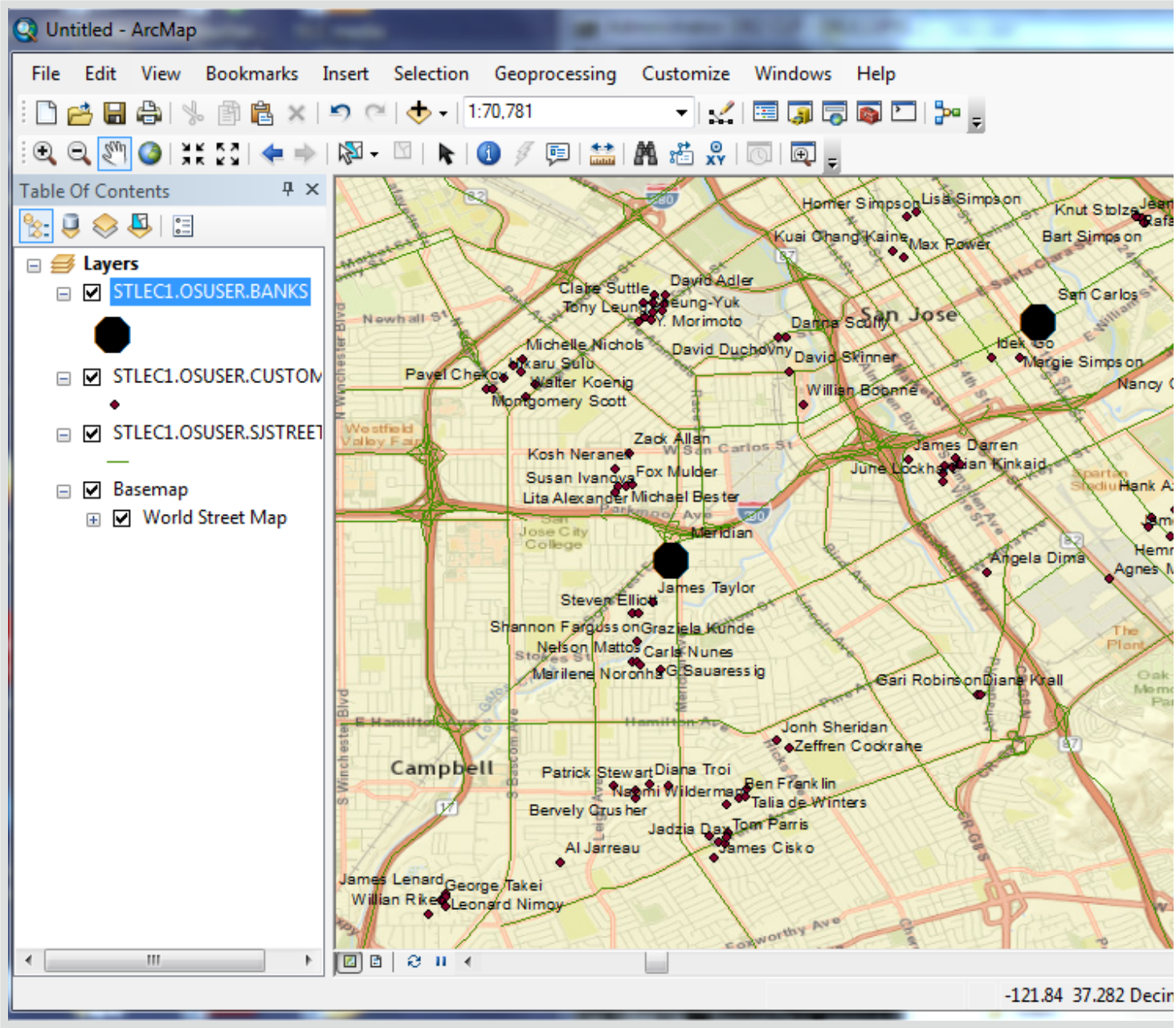


Contents

Overview

Skill Level: Any Skill Level

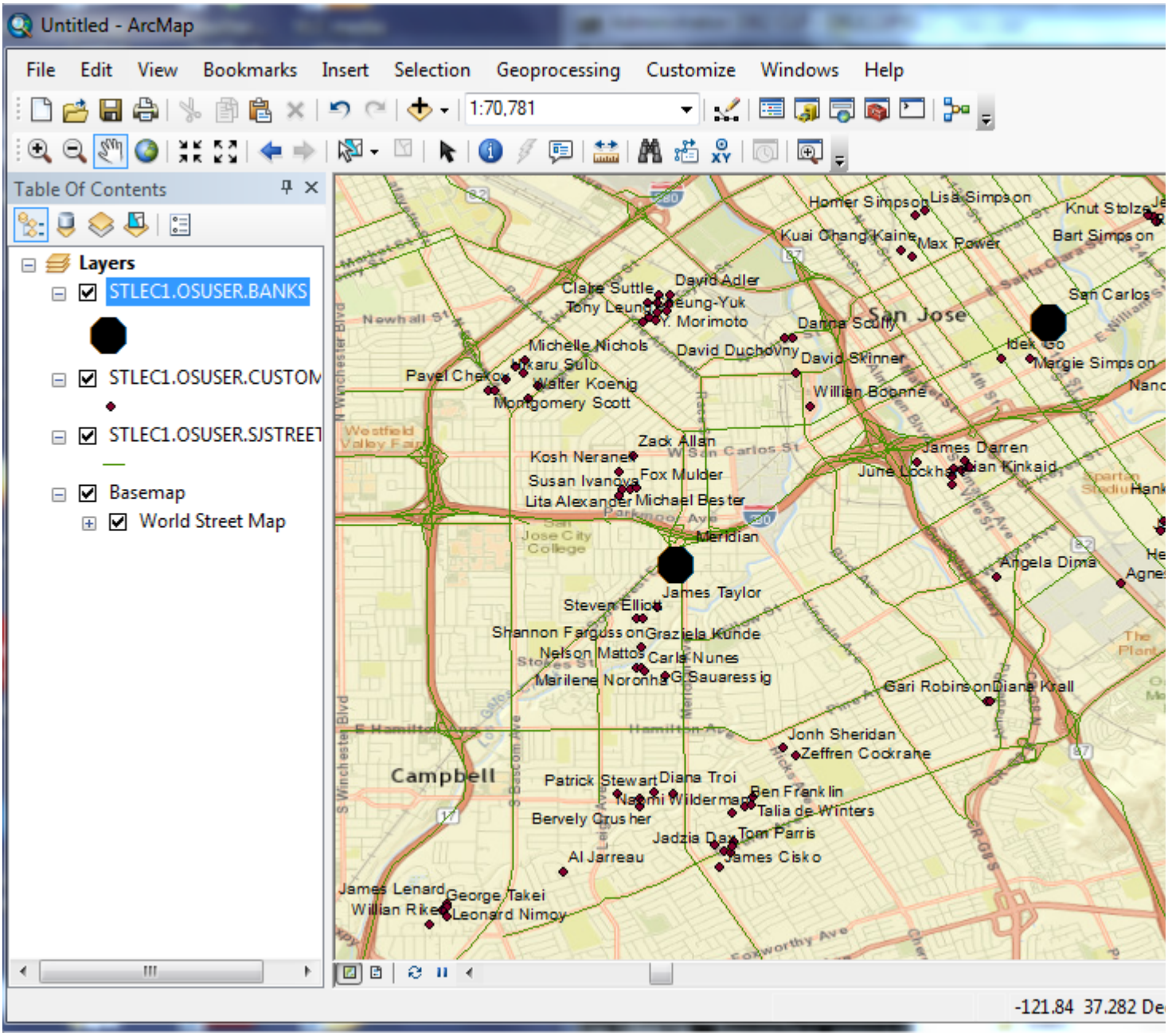
Esri ArcGIS Desktop is a full-function GIS tool for displaying and analyzing spatial data.

This recipe takes you through the steps to load spatial data into a Db2 database, connect to Db2 an
spatial tables.

Ingredients

- Db2 client and server(Db2 Developer client & server download)
- Esri ArcGIS Desktop (download trial)
- Sample data (download)
- Db2 spatial documentation as appropriate for your environment:
  - Db2 for z/OS Knowledge Center
  - Db2 LUW Knowledge Center

With this recipe you will create a map of San Jose streets, two bank branches and a number of sample
like the following screen capture from ArcGIS Desktop on Windows connecting to a Db2 for z/OS datab



Step-by-step

1 Setup Db2 and sample data

1. Note: this recipe uses the database name **STLEC1** and the database connection userid **SY** values in the examples to your database name and userid.
2. Download and unzip the sample data to a convenient directory.
3. Open a Db2 command window where you can execute SQL statements. If you are using a r sure it is cataloged locally. You can use the scripts **catalog-luw.sql** or **catalog-zos.sql** as a

changes for the remote server location.
You can execute the script with a command like:
db2 -tvf catalog-zos.sql

4. Import sample spatial for banks, customers and San Jose streets.
   – Modify the scripts **import-luw.sql** or **import-zos.sql** as appropriate to change the userid procedure. (The scripts contain descriptions of each of the steps and any modifications ne
   – Execute the script with a command like:
   db2 -tvf import-zos.sql
   – Check that there were no processing errors
5. Verify the imported data with the SQL statement (change "**osuser**" to your connection use
   db2 select name, street, varchar(db2gse.st_astext(geom),32) from osuser.banks
   which should return the name, street address and location of the **Meridian** and **San Carlos**

2 Install and setup ArcGIS Desktop

If you already have ArcGIS Desktop, you are all set.

If you don't, a 21 day **full-function** trial is available for download. It is straightforward to setup and install the product.

If you are not familiar with ArcGIS Desktop, you should work through the ArcMap Get-Started adding and symbolizing geospatial data before continuing on below to add data from DB2.

3 Connect to the database and add data

Start up an ArcMap session with an empty workspace. Click on the **Add Data** icon and se **Connections**.

Then click **Add Database Connection** which will display the dialog below to select the appropr
either **DB2** or **DB2 for z/OS** and then provide the **Data source** (usually the database name) and
name and **Password** for **Database authentication.**

Double-click the database **Connection** to show the list of tables.

Scroll until you find the **BANKS, CUSTOMERS** and **SJSTREETS** tables. Select all 3 and then cli

A dialog will be displayed to create a **Query Layer** corresponding to each table. Select the chec
OBJECTID for each of the tables. This is necessary to tell ArcGIS which column has a unique c

Use the context menus to zoom to the **CUSTOMER** layer, label the **CUSTOMER** and BANK layer
symbols associated with these layers so the map looks like the following:

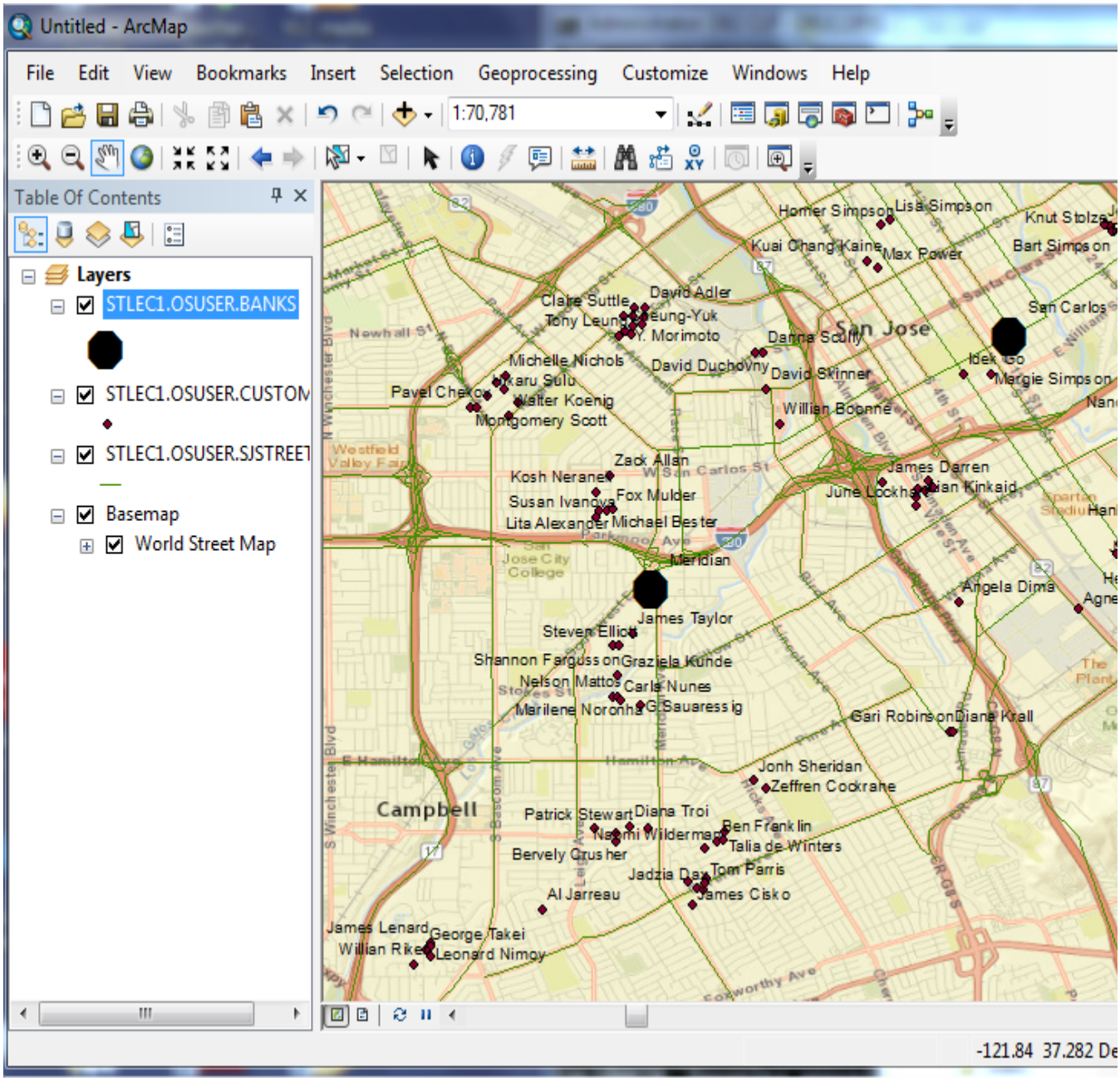
4 Add a basemap

One of the powerful capabilities included with ArcGIS Desktop is the ability to integrate attrac
ArcGIS online.

Click on the little triangle next to the **Add Data** icon to drop down the selection **Add Basemap**.

This will display a number of available basemaps that you can try out. Select the **Streets** basei

This will now display our sample data on top of a street basemap to provide additional cartogr



5 Conclusion

The Esri family of ArcGIS products provide the capability to create, maintain, analyze and visua across server, desktop and web platforms. From the Esri home page you can find information c services and resources needed to meet application needs.

In this recipe we have shown how to take the first steps to connect ArcGIS Desktop to a Db2 d geospatial data residing in database tables. From here you can move on to create custom appl Python scripts to analyze data, perform geoprocessing and produce hardcopy maps.

by David Adler

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