

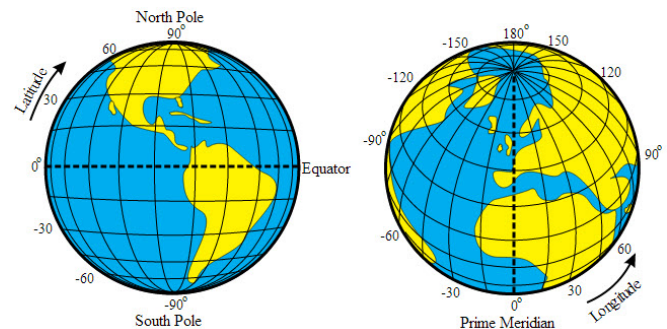
XY Data to Points

Welcome to the Essential ArcGIS Task Sheet Series. This series supplements the Iowa State University GIS Geospatial Technology Training Program short course series, “Essential ArcGIS Tutorial Series.” The task sheets are designed to provide quick, easy instructions for performing specific tasks in GIS.

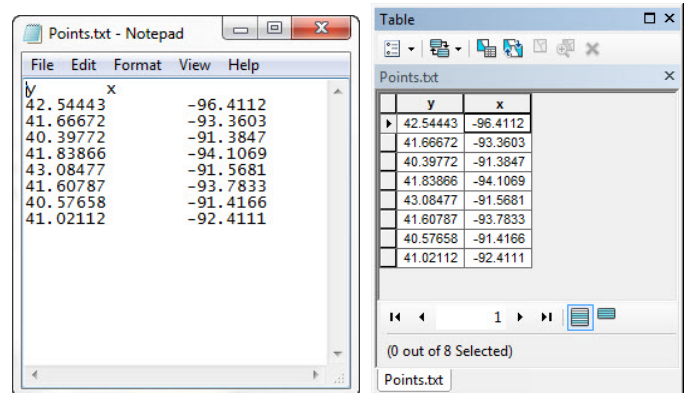
XY data saved in several different formats can be brought into the ArcGIS software suite, these include: Excel 97-2003 (.xls), comma-separated values (.csv) or text (.txt). This task sheet will show an example with a text file containing coordinates in decimal degrees. The X represents the longitude and the Y represents latitude. We will display the points in the WGS84 geodetic datum. Example of coordinates in decimal degrees: Ames, Iowa is located at longitude X: -93.6200 and latitude Y: 42.0347. *Note: It is very important to remember latitude is the Y value and longitude is the X value, and longitudinal coordinate values in the United States will always be a negative value.*

1. Download the Data

- To download the data used in this task sheet, navigate to www.extension.iastate.edu/communities/gis/quicktasksheets/data in a web browser. Click on the publication number that matches this task sheet. In this case, the publication number is **PM2082-14i**. *Note: the publication number can be found on the bottom right-hand corner of the second page of this task sheet.*
- When the download is complete, you will need to unzip the folder or copy the files from the zipped folder to a different folder or directory in order to access the files and add them into an ArcMap document.
- Preview the Points.txt file before adding it into ArcMap. If you open the file using Notepad it should look like the image to the right and contain two columns headings, y and x with coordinate values below. If you open the Points.txt file in ArcMap it should look almost identical the view in Notepad, except ArcMap should recognize that the values are tab separated and appropriately format the values into a table format. Compare with the images to the right.

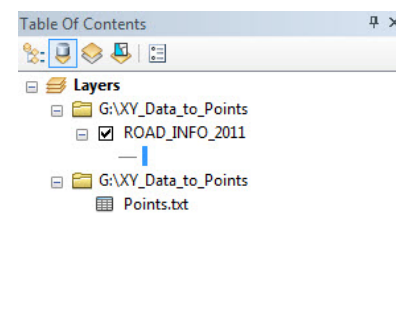


http://en.wikipedia.org/wiki/File:Latitude_and_Longitude_of_the_Earth.svg



2. Display XY Data

- Open a blank ArcMap Document.
- Add the **ROAD_INFO_2011.shp** and the **Points.txt** files to the ArcMap document. *Note: adding the ROAD_INFO_2011.shp sets the data frame projection in ArcMap to WGS84. This step is not necessary as the projection can be set in Step 2c.*
- Right-click on the **Points.txt** file and select **Display XY Data**.



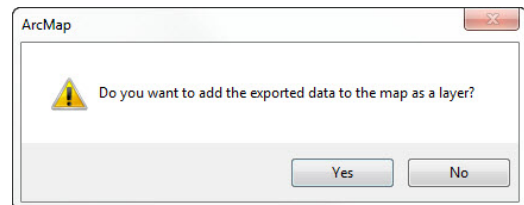
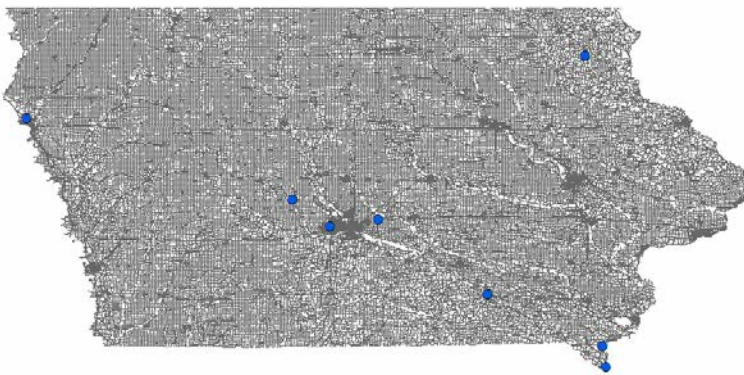
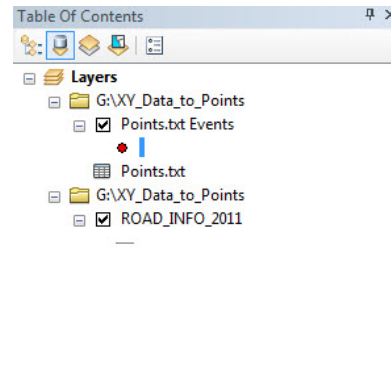
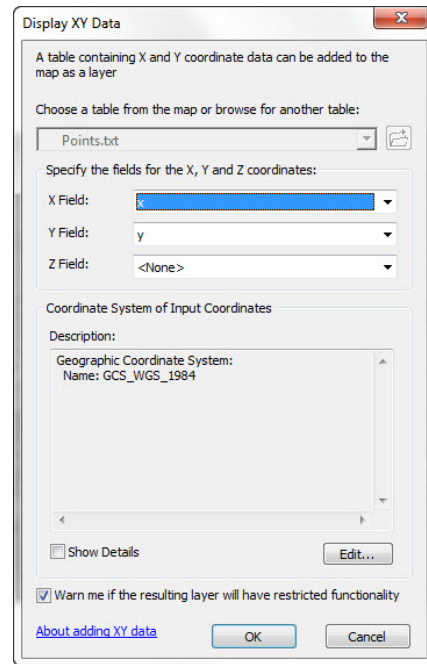
- d. The **Display XY Data window** will appear. Verify that the **X Field** box contains an **x** and the **Y Field** box contains a **y**.
- e. In the **Description** box, verify that the following coordinate system is displayed:

**Geographic Coordinate System:
Name: GCS_WGS_1984**

- f. Click **OK**.

3. XY Data to Point

- a. A new file should be added to the **Table of Contents** called **Points.txt Events**. This is an event layer and is a temporary file that will not persist after the session ends. An event layer can be exported to a permanent feature class using the **Copy Features**, **Feature to Point**, or **Feature Class to Feature Class** tools. If you aren't working within a ModelBuilder model or Python script, follow Step 3b.
- b. Right-click on the **Points.txt Events** layer in the **Table of Contents**. Select **Data > Data Export**.
- c. In the **Data Export window**, click on the folder icon to browse to the location you would like to save the permanent point file and name it appropriately.
- d. A window will appear asking "**Do you want to add the exported data to the map as a layer?**", click **Yes**. The layer will be added to the map document.



Contact:

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...and justice for all

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