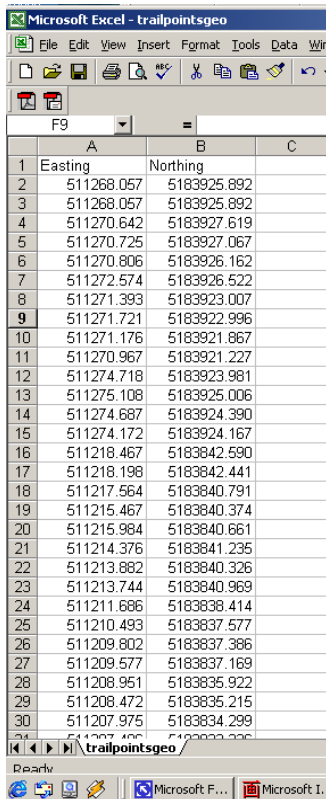


## How to add tabulated geographic coordinates to ArcView 3.x

### Why collect GPS data?

- Ground control points for vegetation and habitat mapping
- Wildlife observation points
- Transects
- Roads and trails
- Property corners and boundaries
- Fences



	A	B	C
1	Easting	Northing	
2	511268.057	5183925.892	
3	511268.057	5183925.892	
4	511270.642	5183927.619	
5	511270.725	5183927.067	
6	511270.806	5183926.162	
7	511272.574	5183926.522	
8	511271.393	5183923.007	
9	511271.721	5183922.996	
10	511271.176	5183921.867	
11	511270.967	5183921.227	
12	511274.718	5183923.981	
13	511275.108	5183925.006	
14	511274.687	5183924.390	
15	511274.172	5183924.167	
16	511218.467	5183842.590	
17	511218.198	5183842.441	
18	511217.564	5183840.791	
19	511215.467	5183840.374	
20	511215.984	5183840.661	
21	511214.376	5183841.235	
22	511213.882	5183840.326	
23	511213.744	5183840.969	
24	511211.686	5183838.414	
25	511210.493	5183837.577	
26	511209.802	5183837.386	
27	511209.577	5183837.169	
28	511208.951	5183835.922	
29	511208.472	5183835.215	
30	511207.975	5183834.299	

### First:

Create a spreadsheet in Excel listing your geographic coordinates in two columns, easting (x- coordinate or longitude) and northing (y-coordinate or latitude).

The coordinates can be expressed in the coordinate system of your choice (UTM, State Plane, decimal degrees, etc.) Your output theme will be in this map projection and datum.

Save the spreadsheet as a **Tab Delimited Text File** (.txt) or a **dBase** file (.dbf).

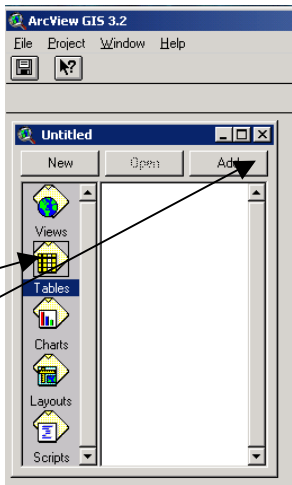
In this example we will be working with GPS points collected along a recreational trail. The name of the text file where the coordinates are saved is named *Trailpointsgeo.txt*.

In this exercise we will bring GPS points representing a new trail (in utm coordinates) into ArcView 3.2.

Step 1: Start ArcView and open a new project.

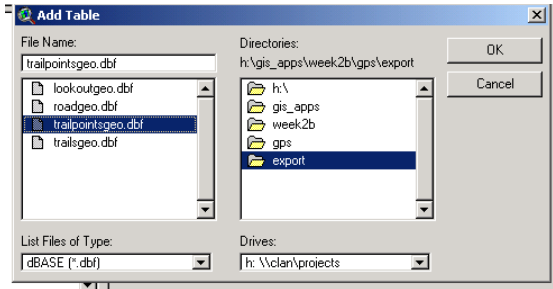
In this step we are going to add a table of geographic coordinates collected with a GPS unit to the ArcView project.

*Step 2:* Highlight the *Tables* environment and press *Add*.



*Step 3:* Select the table trailpointgeo.dbf (or .txt if saved as a text file)

This table contains GPS points in UTM coordinates for a new trail on Moscow Mountain.



This table is simply a spreadsheet of GPS coordinates (easting and northing). This table is saved as a dBase file (.dbf format). ArcView can also read tab delimited text files (.txt).

These files can be created and read in Excel or other spreadsheet programs.

id	Easting	Northing	Max_pcds	Datafile
1	511268.057	5183925.892	0.0	R092721C.cor
2	511268.057	5183925.892	0.0	R092721C.cor
3	511270.642	5183927.619	0.0	R092721C.cor
4	511270.725	5183927.067	0.0	R092721C.cor
5	511270.806	5183926.162	0.0	R092721C.cor
6	511272.574	5183926.522	0.0	R092721C.cor
7	511271.393	5183923.007	0.0	R092721C.cor
8	511271.721	5183922.996	0.0	R092721C.cor
9	511271.176	5183921.867	0.0	R092721C.cor
10	511270.967	5183921.227	0.0	R092721C.cor
11	511274.718	5183923.981	0.0	R092721C.cor
12	511275.108	5183925.006	0.0	R092721C.cor
13	511274.687	5183924.390	0.0	R092721C.cor
14	511274.172	5183924.167	0.0	R092721C.cor
15	511218.467	5183842.590	0.0	R092721C.cor
16	511218.198	5183842.441	0.0	R092721C.cor
17	511217.564	5183840.791	0.0	R092721C.cor

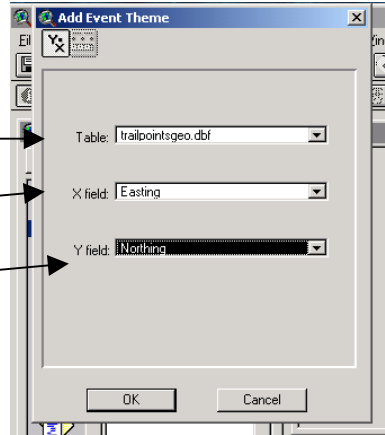
Step 4: Close the table and open a new View.  
Set the working directory.  
Set the View properties – map units and distance units – to meters.

Step 5: Select *Add Event Theme* from the View drop-down menu.

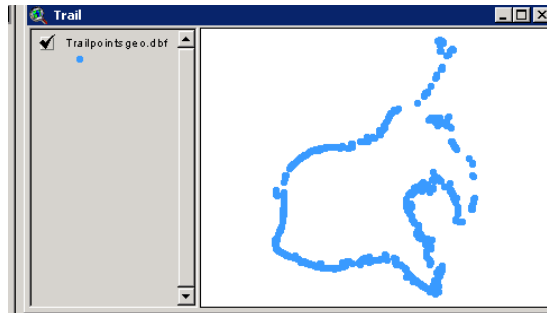
Table: trailpointsgeo.dbf

Xfield: easting

Yfield: northing



Step 6: The GPS points will show in the View.



## Digitizing on screen in ArcView

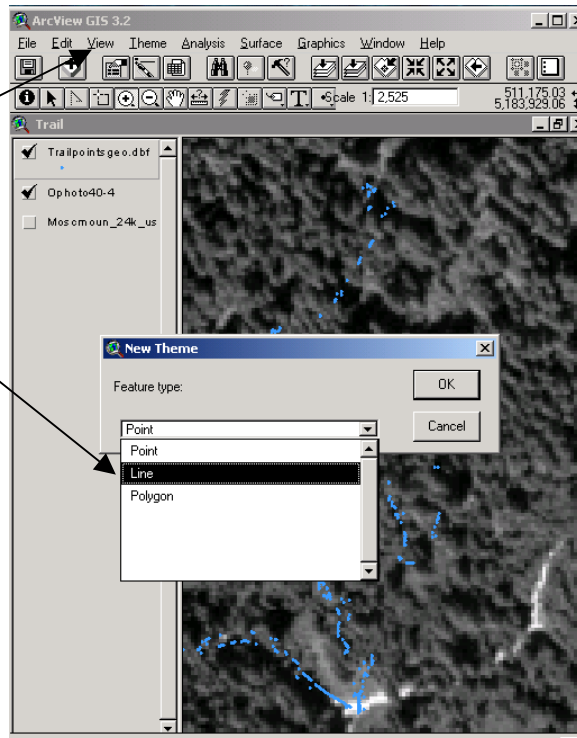
In this exercise we will digitize a trail over the GPS points to create a line theme of the trail. This is useful if your GPS data represents linear features such as roads, fences, property lines etc.

**Step 7:** Zoom in closer to the gps points.

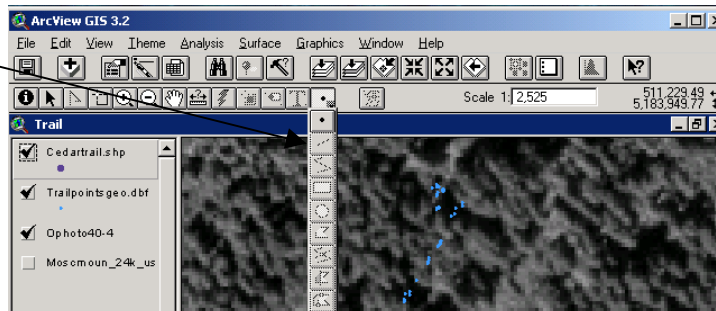
Select New Theme in the View drop-down menu.

Select the Feature type Line

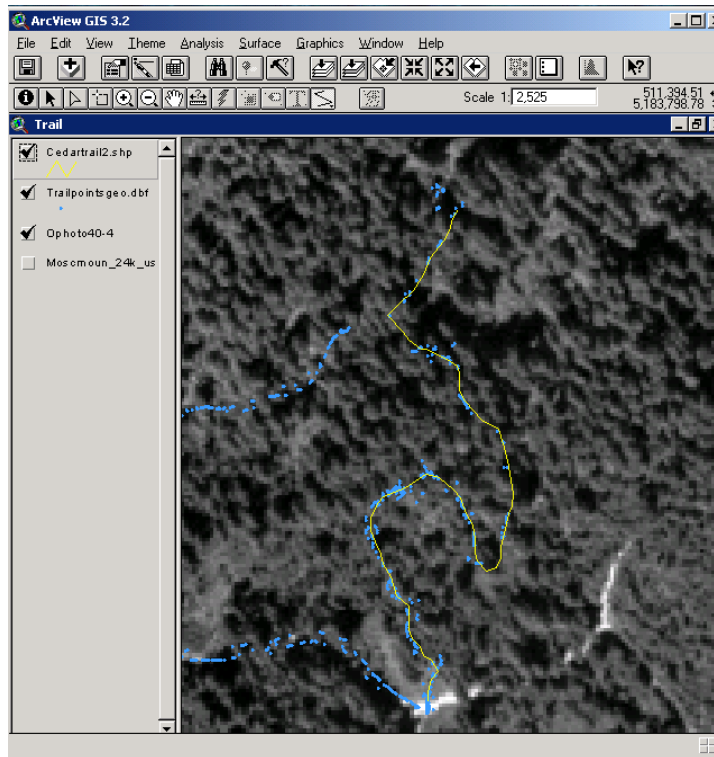
Save the new shapefile in the directory *c:\gis\_apps\week2b*. Name the new theme *cedartrail*



**Step 8:** Select *Draw Line* from the Draw drop-down menu.



Step 9: Begin digitizing along the points. Each click with the computer mouse will represent one vertex. End a line by double-clicking. Be aware of the fact that digitizing is directional. The arc you are digitizing will have a direction from the starting point to the end point.



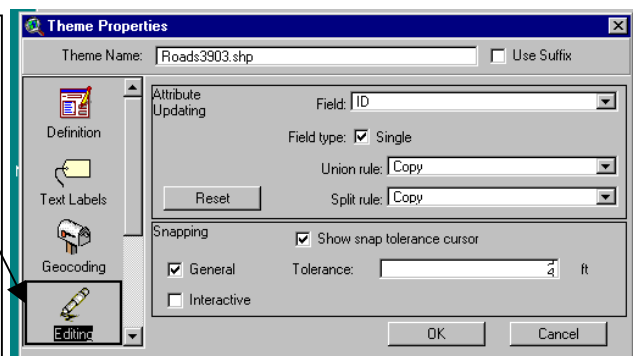
Step 10: When done digitizing – select Theme – Properties to set the Snapping tolerance.

Select Editing in the Theme Properties menu.

Set the General snapping tolerance to 2 ft.

Lines that are within 2 feet of each other will automatically snap together.

Press **OK**.



Step 11: Select *Theme – Stop editing* and save the edits.

You can digitize polygons in a similar fashion.

