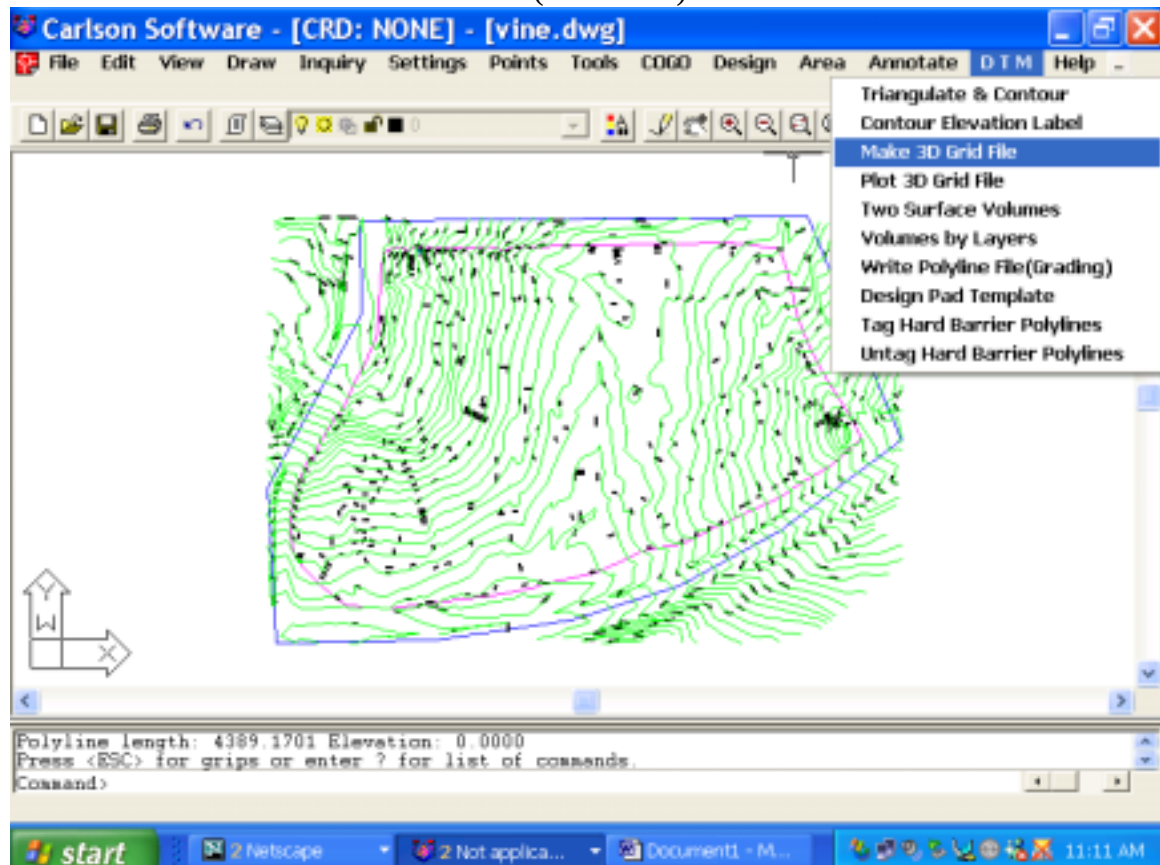


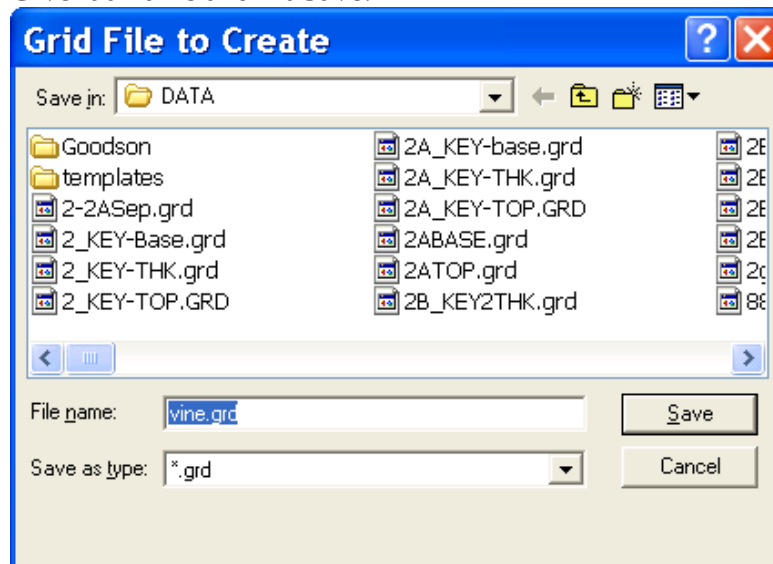
How to Make Points at a Specified Grid Spacing Using Carlson Survey

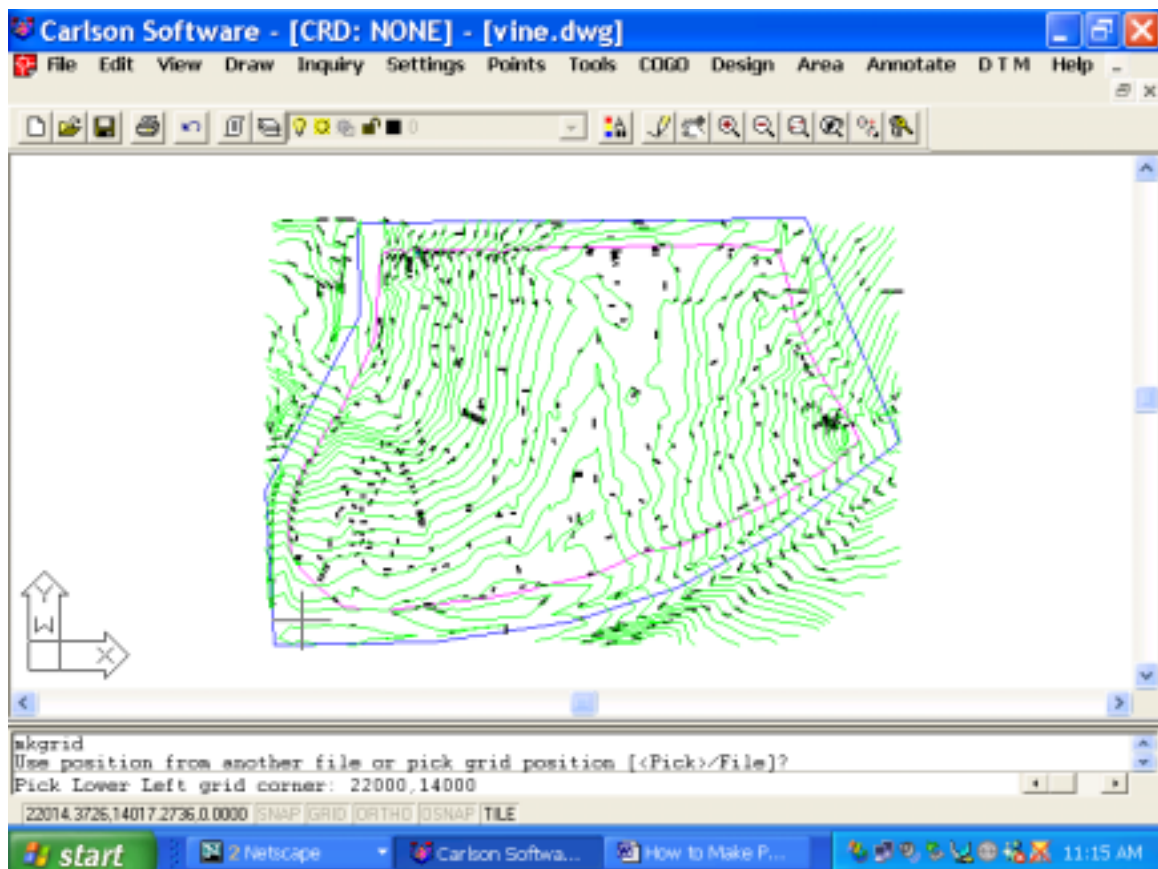
August 1, 2002

1. Do Make 3D Grid File under DTM. (See below):



Give it a name and hit Save.





Note the prompting at the bottom of the screen. Choose Pick (Enter will select the pick option), then pick the lower left grid corner. If you want an “even” northing and easting, such as 22000,14000 as entered above, you can move the cursor to a good lower left position, then examine the coordinates at the extreme lower left corner of the screen (just above “Start”). If you were to pick, you would get 22014.3726,14017.2736, so by entering 22000,14000, you start at nearly the same place, but on “even” coordinates. Because these are AutoCad coordinates, you are actually entering x,y or easting, northing at this prompt. Also, if you don’t see “moving” coordinates in the lower left as you move your cursor, then press function key F6 which toggles the active coordinates “on”. After picking the lower left corner, you will be prompted to pick the upper right corner. Just pick that on the screen.

Next, this dialog will appear:

Make GRiD File

Range of Elevations/Values to Process

Low High

Modeling Method

☒ Triangulation

☐ Inverse Distance

☐ Kriging

☐ Polynomial

☐ Linear Least Squares

Triangulation Mode

☒ Auto Detect

☐ Triangulation Only

☐ Intersection with Triangulation

☐ Intersection Only

of cells in X: 29, in Y: 21

Grid Resolution

Specify Grid Resolution As...

☐ Number of Cells in X and Y

☒ Dimensions of a Cell

X: Y:

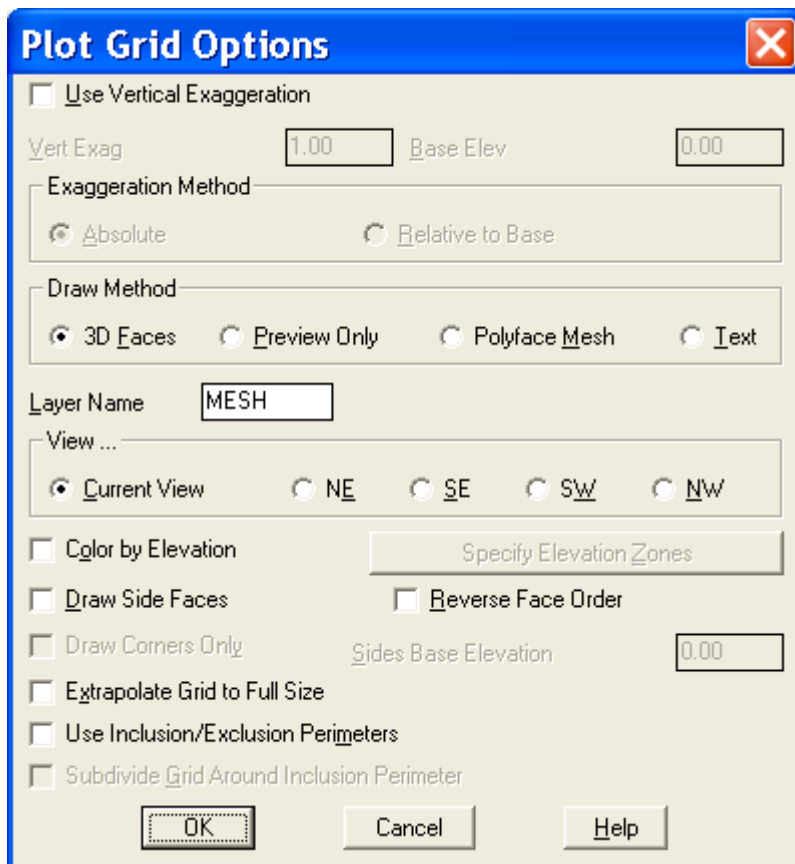
OK Cancel Help

Here is where you set the “dimensions” of the cell, or point spacing, to whatever is desired (in this case, 50x50 interval). Click OK. Next it will prompt, at the bottom of the screen, to select objects:

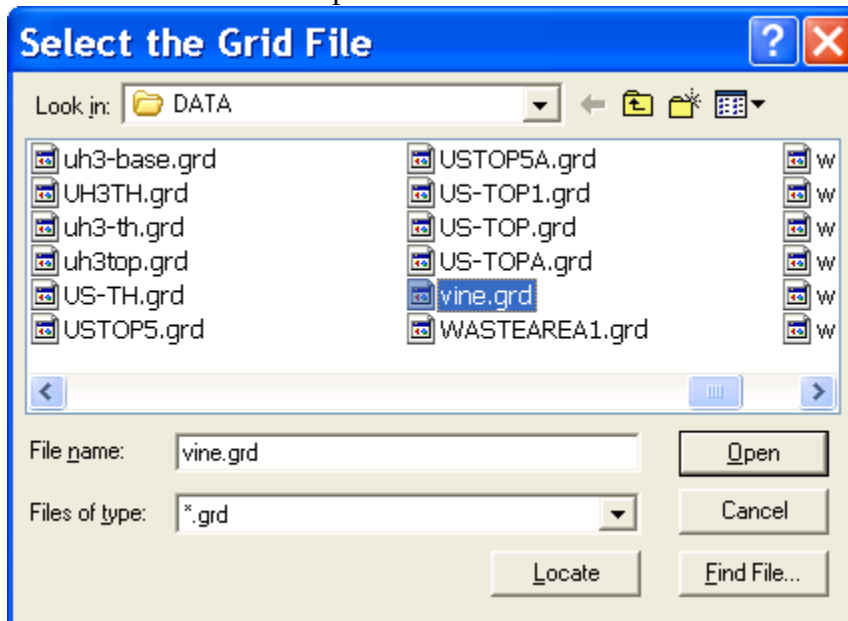
Select objects: Do a crossing selection (lower right pick to upper left pick).

The grid file will then be stored.

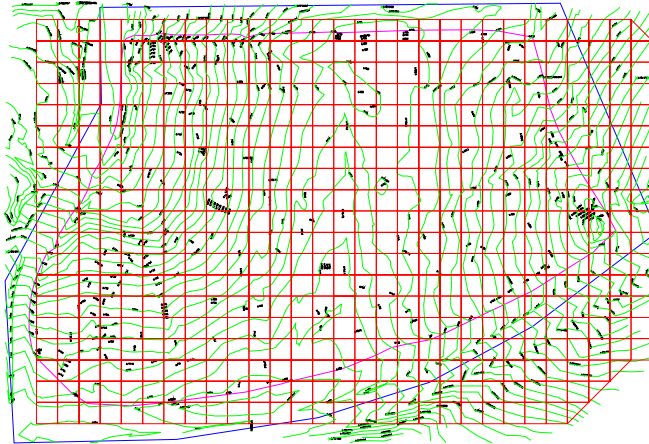
2. The second step is to plot the grid using the command Plot 3D Grid File right under the command Make 3D Grid File. This leads to the following dialog:



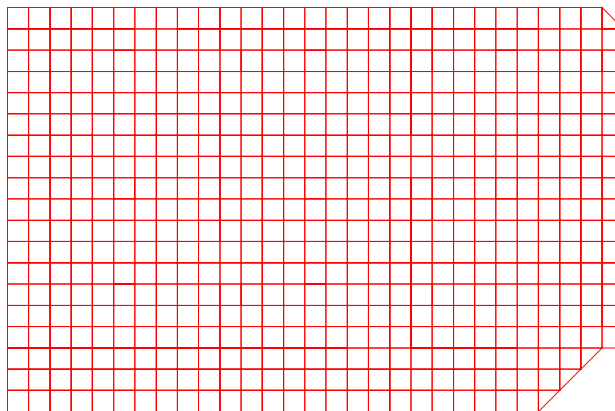
Just use the default settings as shown, and click OK. Then select the grid file as shown below and click Open.



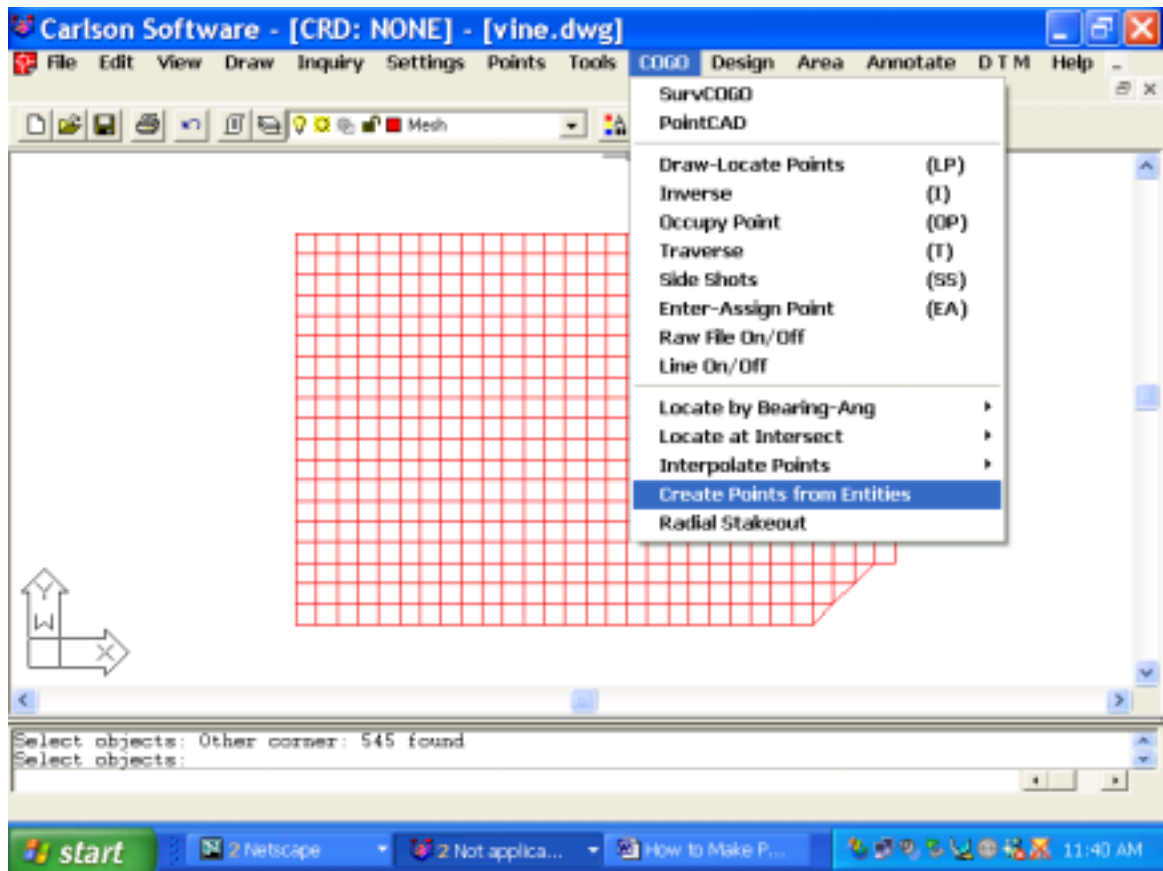
This will lead to a plot of the 3D grid, as shown below:



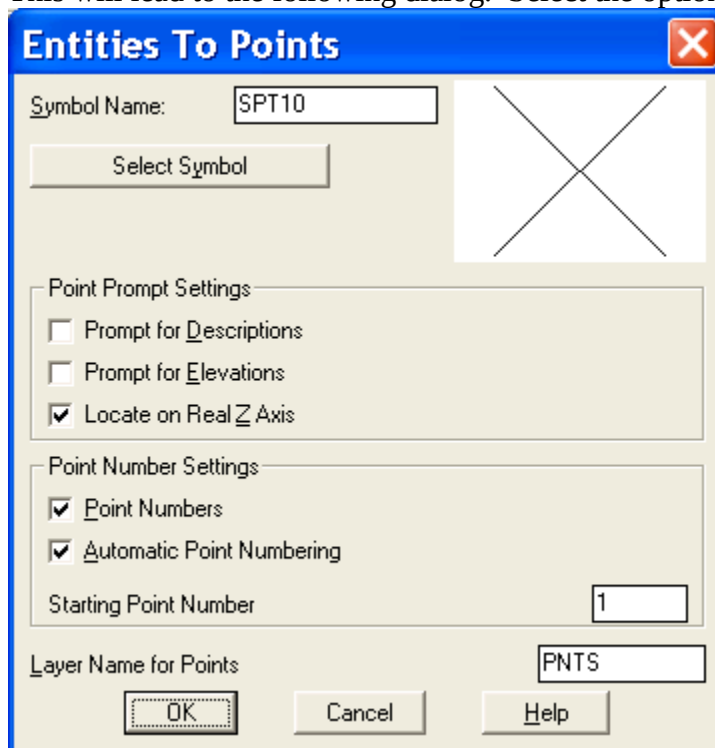
3. The third step is to isolate to the grid layer, which we will then turn into points in step 4. To Isolate to the grid layer, choose the command Isolate Layer under View, and pick on the red grid layer. This will be the result:



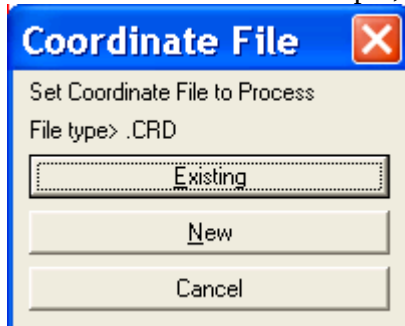
4. The fourth and final step is to convert these grid corners into points. For this, use the command Create Points from Entities found under the Cogo pulldown.



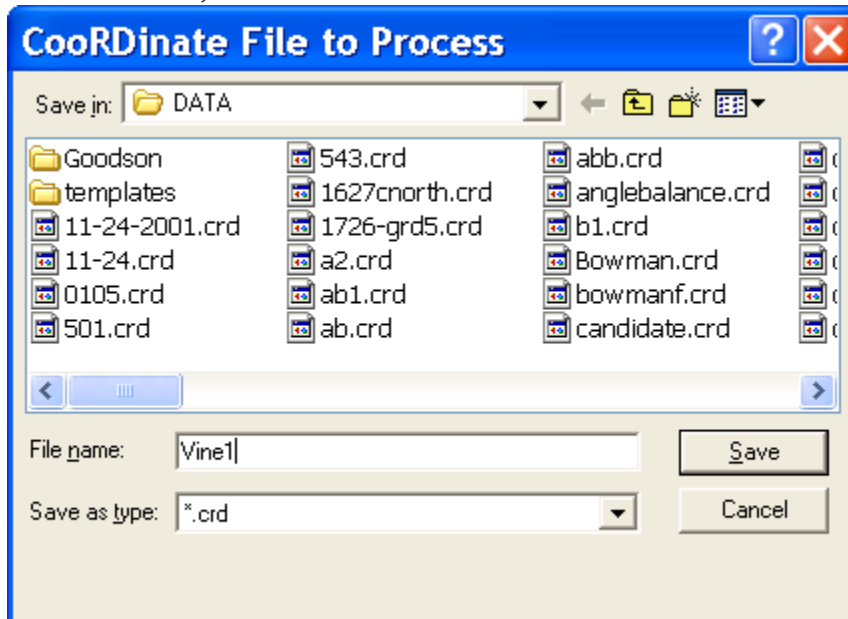
This will lead to the following dialog. Select the options shown:



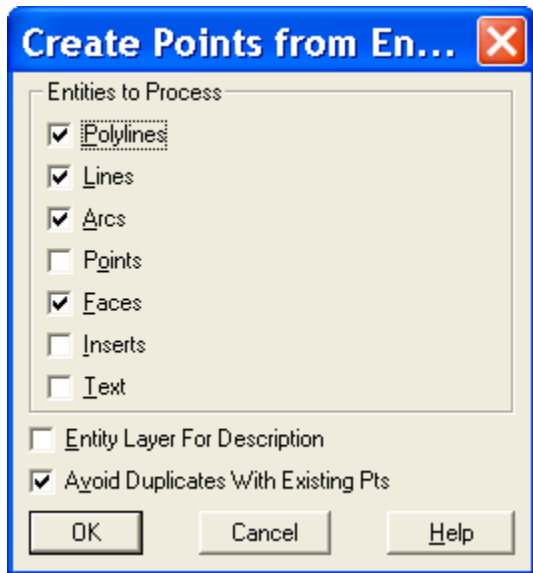
Note that we will start at point 1 in this case, because we haven't yet set a coordinate file, and when we do, we will number from point 1 going up. But if you are already in a coordinate file, you may want to set the starting point number to a high point to create a separate and distinct range of points. Because we have not yet started a coordinate file in our example, we get the following screen next:



We select New, and make a new file called Vine1.



The next dialog is critical. Here we select what kind of entities we will turn into points. We choose "Faces".



Now click OK. You will be asked to select objects. Window the entire area of the grid. The points are created immediately, and the process is complete. Here's a zoomed in "look" at the result:

