

SOFTWARE

KrackPlot: A Picture's Worth a Thousand Words

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What Is KrackPlot?

KrackPlot is a program that allows the user to draw and modify sociograms very easily on any DOS machine. Among other things, the user can move nodes, add or delete nodes and lines, rotate the graph, arrange the nodes in a circle, and draw full or dashed lines with or without arrowheads to indicate directional relations. Once the sociogram appears on the screen as the user would like it, a printer file can be created which can be printed on almost any printer or plotter currently available to make a high-quality hard copy of the sociogram.

How to get a Copy of KrackPlot

KrackPlot is available through Steve Borgatti at the following address:

Steve Borgatti
Analytic Technologies
306 South Walker Street
Columbia, South Carolina 29205

The price of the program for INSNA members is \$20 (plus \$5 shipping and handling within the Americas, \$11 within Europe, or \$14 elsewhere). The shipping and handling fee for KrackPlot is waived if UCINET is purchased at the same time. Payments may be made via a check made out to Analytic Technologies or through a Visa or MasterCard credit card number.

Borgatti has rewritten UCINET to make it easier to communicate back and forth between UCINET and KrackPlot. You can use UCINET's EXPORT routine to create data files that can be read directly into KrackPlot. Thus, data can be read into either program then transferred to the other program fairly easily.

Using KrackPlot

There are two ways to input data to KrackPlot. The user can create an input file that contains the data that KrackPlot uses to plot the points and draw the lines on the screen. Or, alternatively, the user can input the data by running KrackPlot and adding nodes and lines to an otherwise blank screen. In this latter case, one would "open" a non-existent file (which will appear as a blank screen), and then "modify" it by adding nodes and lines. When the picture is complete, the user can "save" it; the resulting output file will contain all the node and line information in the format required to replicate the picture in the future.

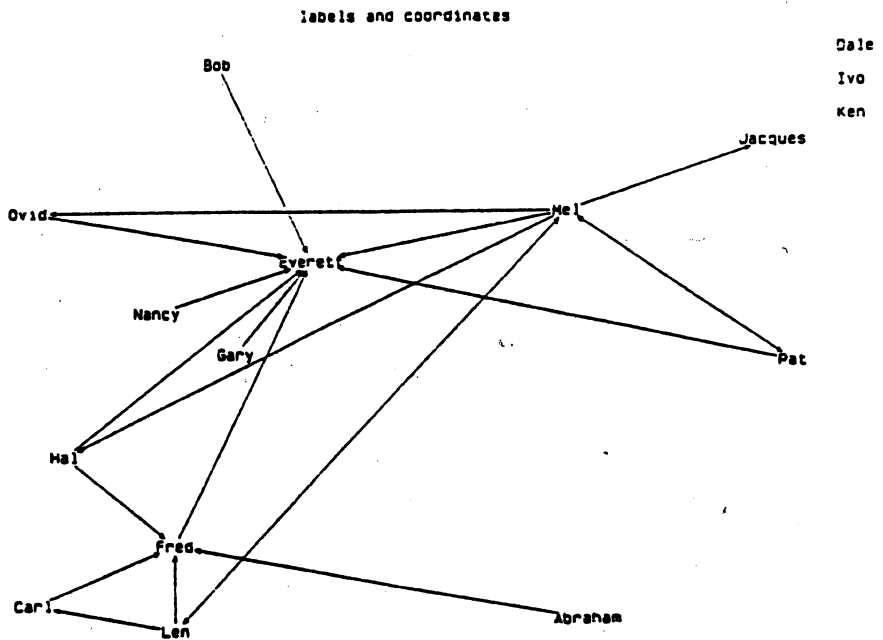
The following pages show through example how input files may be created for KrackPlot.

How to Create an Input File:

The following is a sample input file. The first line contains the number of nodes (=N, or "16" in this case). The next N lines each contain a pair of numbers followed by a node label. The pair of numbers are the initial (x,y) coordinates for the placement of that node. These coordinates are automatically rescaled by the program, so their original values can take on any arbitrary range. The matrix of 1's and 0's that follow represent the adjacency matrix, that is, the presence or absence of lines connecting the nodes.

```

16
511.3  9. Abraham
160.6  438. Bob
-29.2  23. Carl
-772.8  440. Dale
249.4  284. Everett
102.1  64. Fred
174.1  214. Gary
0. 137. Hal
772.7  420. Ivo
689.3  379. Jacques
772.4  400. Ken
110.5  0. Len
488.3  325. Mel
87.1  246. Nancy
-30.2  324. Ovid
715.3  205. Pat
00001000000000
00001000000000
00000100000000
00000000000000
00000000000000
00001000000000
00001000000000
00001100000000
00000000000000
00000000000000
00000000000000
0010010000001000
0000100101010011
0000100000000000
0000100000000000
0000100000001000
    
```



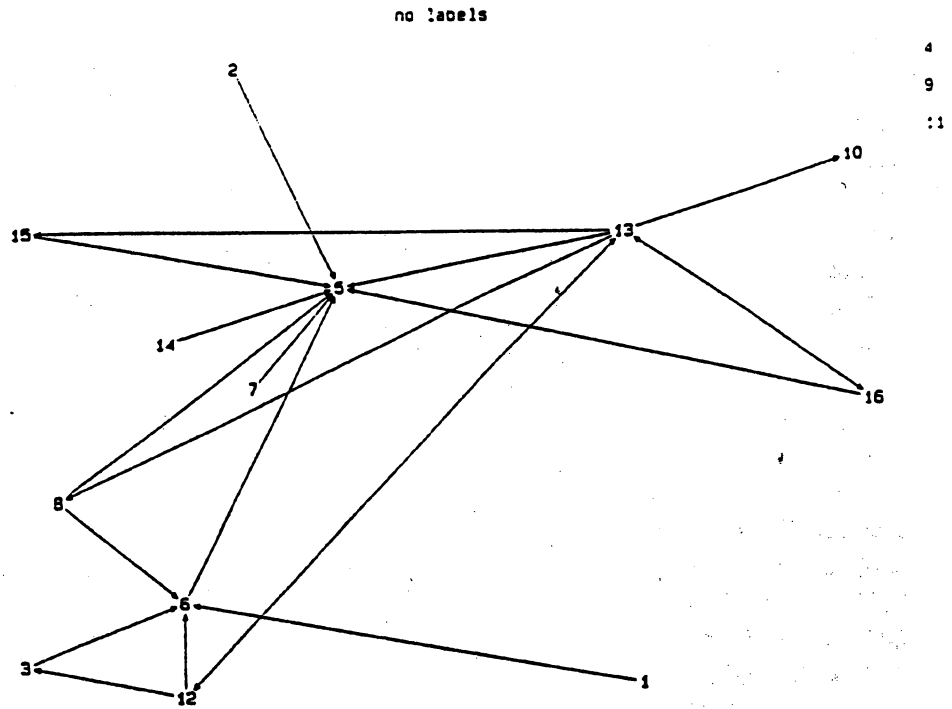
Some points to note about the format of the input file:

Neither the node numbers nor the names need to be directly lined up vertically. Nor do the coordinates need decimal points. Each (x,y) pair and associated node must occur on a separate line.

The node names themselves are also optional. That is, an input file does not need to contain any node names. In this case, the program will assign the numbers 1 to N as labels for each of the nodes. See the following sample input file.

```

16
511.3 9.
160.6 438.
-29.2 23.
-772.8 440.
249.4 284.
102.1 64.
174.1 214.
0. 137.
772.7 420.
689.3 379.
772.4 400.
110.5 0.
488.3 325.
87.1 246.
-30.2 324.
715.3 205.
0000010000000000
0000100000000000
0000010000000000
0000000000000000
0000000000000000
0000100000000000
0000100000000000
0000110000000000
0000000000000000
0000000000000000
0000000000000000
0010010000001000
0000100101010011
0000100000000000
0000100000000000
0000100000001000
    
```



It is also possible to omit assigning specific (x,y) coordinates to the nodes. In the example below, "inc" tells the program that there are "no coordinates." The program will automatically put the nodes in a circle.

```

16
!nc Abraham
Bob
  Carl
  Dale
  Ev
  Fred
  Gary
  Hal
  Ivo
  Jack
  Ken
  Len
  Mel
  Nancy
  Ovid
  Pat

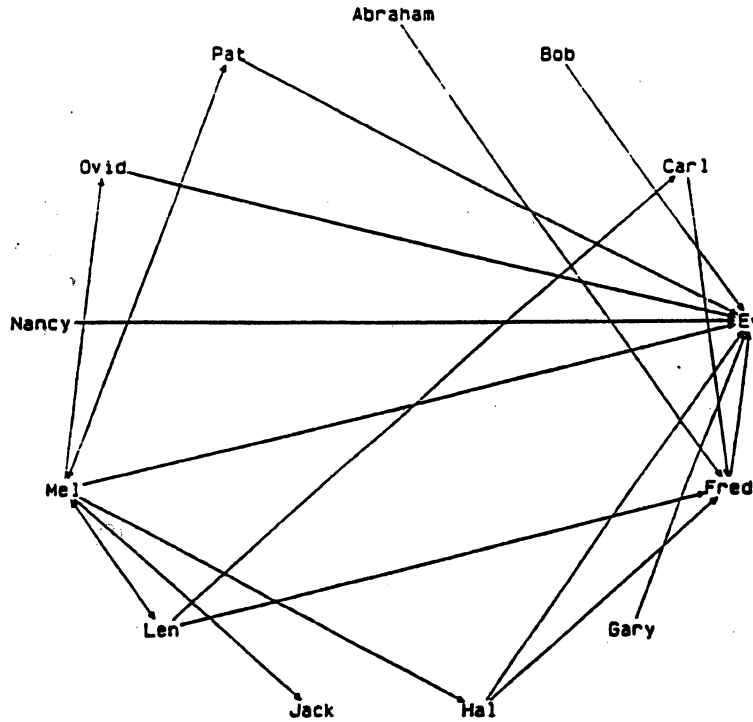
```

```

0000100000000000
0000100000000000
0000010000000000
0000000000000000
0000000000000000
0000100000000000
0000100000000000
0000110000000000
0000000000000000
0000000000000000
0000000000000000
0010010000001000
0000100101010011
0000100000000000
0000100000000000
0000100000001000

```

!nc = no coordinates



```

Dale
Ivo
Ken

```

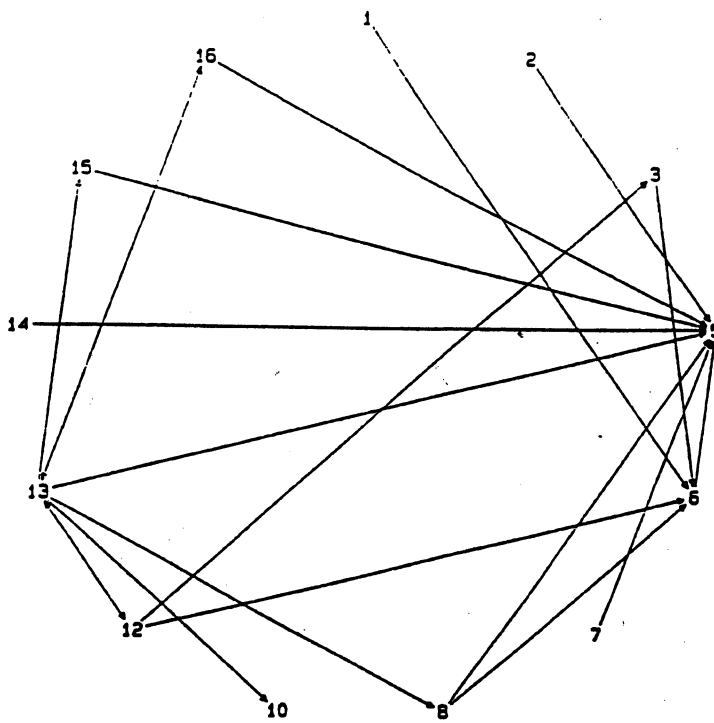
In addition to omitting the assignment of (x,y) coordinates, it is also possible to omit both labels and coordinates. As seen in the example below, "!nc !nl" is the command "no coordinates, no labels." The program will automatically put the nodes in a circle as well as assign the numbers 1 to N as labels for each of the nodes.

```

16
!nc !nl
0000100000000000
0000100000000000
0000010000000000
0000000000000000
0000000000000000
0000100000000000
0000100000000000
0000110000000000
0000000000000000
0000000000000000
0000000000000000
0010010000001000
0000100101010011
0000100000000000
0000100000000000
0000100000001000

```

!nc !nl = no coordinates, no labels



4
9
11

Finally, the following example shows the placement of the nodes around one central node ("El Centro"). The lines each connect from the outer nodes to El Centro only, forming a spoked wheel design (without the surrounding "wheel"). This file differs from the previous files in that the adjacency matrix has taken on values from 0 to 9 (they must be integers in this range only). These values can be used optionally to create lines of varying thickness or "textured" lines (lines comprised of patterns of dashes.)

```

10
299 321 1
434 284 2
503 188 3
479 80 4
369 12 5
226 12 6
120 80 7
96 188 8
165 284 9
299 165 ElCentro

```

```

0000000001
0000000002
0000000003
0000000004
0000000005
0000000006
0000000007
0000000008
0000000009
0000000000

```

El Centro Input File

