



HACI User Manual

HACI (V. 1.2) is an AutoLISP application for AutoCAD 2000 or R14. It converts your drawing to hatch pattern, so you can easily convert your logos, symbols or patterns to hatches, which can be used in standard HATCH or BHATCH commands.

The hatch patterns that AutoCAD created are stored in a file called acad.pat, which is stored in the Support folder. The HACI program will append the definition of a new pattern at the end of this file, or any other PAT file you select. The PAT files are regular text files, but with the extension PAT. You can edit these files using Notepad or other text editor.

Hatch pattern definition

The first line of the pattern definition begin with an asterisk (*) followed by the name of the hatch pattern. A comma and a brief description of the pattern follow the name. The next line(s) will describe a single drawing pass over the hatch pattern. Each line consist in four parts: angle, xy Origin, Offset x, Offset y and penlift pattern. Here is an example:

```
45, 0,0, 0,0.5, 0.5,0.25, 0.25,-0.25
```

The first 45 in the line determine the angle at which the pattern is to be drawn. Don't confuse this with the angle of the hatch pattern; that's controlled by the BHATCH command. A hatch pattern is a successive series of lines drawn from left to right, then from down to up.

The next part 0,0 is the beginning point for the first pass. The offset-x and offset-y are 0.5,0.25, respectively. That's mean that each successive line in the pattern will move to the right 0.5 units and up 0.25 units.

The coordinates 0.25,-0.25 are the dash pattern. It's the same pattern used for creating line types. The positive number represents the number of unit spacings that the pen is held down. The negative numbers represent the number of unit spacings that the pen is lifted up.

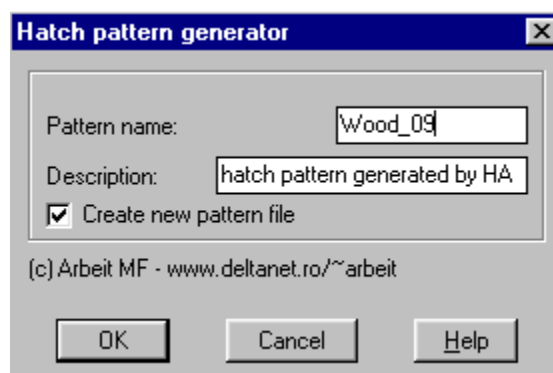
Usage of HACI

Load the application using the pull-down menu: Tools -> Load Application – select the file haci.lsp or haci.vlx. At the *Command* prompt, you can load the application using the AutoLISP function load:

```
Command: (load "haci")
```

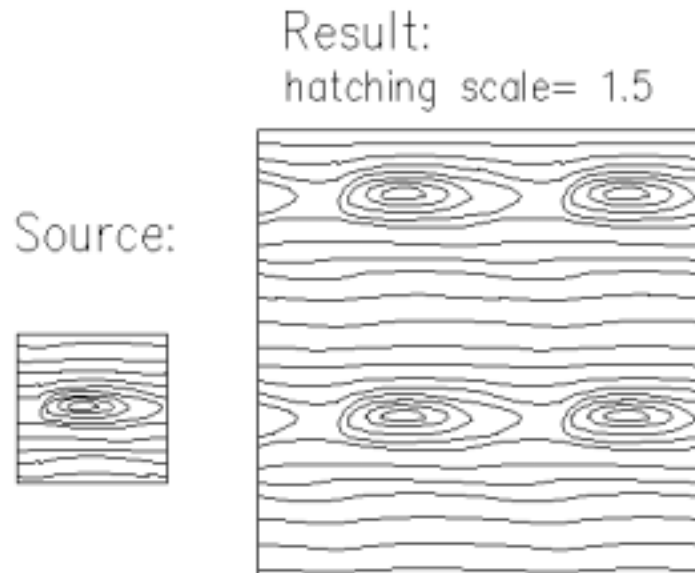
The file haci.lsp (or haci.vlx) must be in the AutoCAD support file search path.

Take any of your existing drawings, explode it to lines and fit it into a cell of 1x1 unit. Set a value for snap. The snap value gives the precision of the conversion. Then launch the program using the command **haci**. The dialog box below will be displayed.



Enter a name and a description for your hatch pattern. The toggle "Create new pattern file" must be enabled if you want to put your pattern in a new file. If the toggle is not enabled, the new pattern will be append at the end of an existing file. In this case is recommended to use the file "acad.pat" or "acadiso.pat". Description is optionally; then click OK. The prompt *Select objects* will appear. Select the entities from the cell. HACHI will process these entities according to the snap value. Then a file dialog box appears. You must select the PAT file. HACHI will create the new pattern definition and append them at the end of the selected file. Then you can use the pattern with the HATCH or BHATCH command.

Example:



Precision

The precision of calculus is affected by the snap value. The default value is 0.05. As the snap value is smaller, it is necessary more time for processing. The maximum precision allowed is 0.001.

HACHI use a function named **hcor** to modify the source of pattern, according to the snap value.

If you draw the source using the snap mode, you can deactivate the call of hcor function using the AutoLISP function *setq*, after loading the application, but before using HACHI:

Command: (setq un_snap nil)

This will reduce the necessary time for processing.

It is recommended to let the program to call the function hcor, and use a snap value 0.05 or 0.01.

Limitations

Only LINE entities are processed. Any 2D entity can be converted to LINES. You must do this conversion before using HACHI.

You have to use a 1x1 cell when draw the source. The source can also be smaller than 1x1 if the cells in the resulting hatch are independent.

If you use a pattern name that exists in the acad.pat file, the new definition will be ignored. You must first erase the old definition from the file.

For any question regarding the HACHI program, please contact Arbeit MF at: arbeit@deltanet.ro.