

Printing to the Hp650C Plotter

Pooya Forghani, August 2002

I. Files in PC

1. The printer software is currently installed on a PC in WL308. The plotter driver can be downloaded from HP site and installed on the other PCs if it is needed.
2. In plotter, go to the plot management menu and change the language to automatic.
3. To print a file, open the file in the proper software, change the page size to the desired size and print the file using the print menu. The plotter paper width is 32 inches.

II. Files in Unix Machines

A. Printing the layouts from command line

1. Use cadence plot menu and print to a ps file. The plot settings are as follows:
Display name->Display
Plotter name->local_color
Page size->A
2. In plotter, go to the plot management menu and set the language to postscript and then increase the size from %100 to %419. This would fit the print to the plotter paper size.
3. Use the following command in command line to plot to the HP650c
>lpr -P hp308pl file.ps

B. Printing layouts from the Cadence environment (Not working properly)

1. Edit the .cdsplotinit file in your unix home directory using the codes attached in appendix of this document.
2. Use the plot menu in cadence and choose the "Hellwet Packard Design Jet 650C" printer to plot the files.
3. Since this method has some problems with the paper sizes, the reader is more than welcome to correct the codes and resubmit the corrected codes to the group.

C. Printing cadence layouts from PC

1. Print the layout to a ps file using cadence plot menu with the settings of section A. You can view a ps file using the following command:
>gs file.ps
2. Convert the ps file to pdf format using unix convert command or the following command :
>ps2pdf file.ps file.pdf
3. Use acroread to view the created pdf file and check if everything is OK.
4. Send the created pdf file to the PC. This can be done either by e-mail or FTP command.

5. In PC, use Acrobat Reader software to open the created file and then change the paper size to your desired paper size and then print to the plotter.

III. General comments

1. **Be patient.** Printing a layout, generally, is a time consuming process. It may take an hour to print a complicated layout. The plotter may process the printing for an hour and does not print the file because of running out of memory. If you are printing from a PC, go to the plotter settings and select an option to use the PC memory whenever plotter runs out of memory.
2. **Do not wait until the last moments to plot your layouts.**
3. The HP650c plotter language can be set to different format of printed files such as automatic, postscript, HP-GL/2 and 7580-HP-GL/2. For plotting from PC the language is set to automatic. However, for plotting ps files from unix command line the language is set to postscript with scaling. Before printing, make sure that the plotter language is proper for your application.

Printing to CoC Color Printers

There are two color printers in CoC building, rooms 308 and 309. The printer names are hp308color and hp309color. The A4 format color prints can be done using these printers. Simply use the following commands in unix command line to plot to these printers.

>lpr -P hp308color@cmpe-intel (CoC 308 color printer)

>lpr -P hp309color@cmpe-intel (CoC 309 color printer)

Plotting a complicated layout may take plenty of hours. Fast, but low quality, prints can be done using the following trick.

1. Create the ps file from cadence environment.
2. Use the convert command in unix command line to convert ps format to tiff format.
>convert file.ps file.tiff
3. Again, use the convert command to convert back the tiff file to a ps file.
>convert file.tiff filenew.ps
4. Print the new ps file (filenew.ps) instead of primary ps file. The print would be done in less than five minutes.

Appendix- Codes for adding the HP650C plotter to cadence .cdsplotinit

file

```
Hewlett-Packard DesignJet 650C| hp650c: \  
:spool=/usr/local/bin/lpr -Php308pl: \  
:query=/usr/local/bin/lpq -Php308pl: \  
:remove=/usr/local/bin/lprm -Php308pl $3: \  
:instdir=/tools/cadsol/ic446/tools/plot: \  
:manufacturer=Hewlett-Packard: \  
:type=postscript2: \  
:maximumPages#10: \  
:resolution#1016: \  
:paperSize="A portrait" 8226 9806: \  
:paperSize="A landscape" 10766 7266: \  
:paperSize="B portrait" 10766 15902: \  
:paperSize="B landscape" 16862 9806: \  
:paperSize="C portrait" 16862 20982: \  
:paperSize="C landscape" 21942 15902: \  
:paperSize="D portrait" 21942 33174: \  
:paperSize="D landscape" 34134 20982: \  
:papersize="E portrait" 34134 43334: \  
:paperSize="A0 portrait" 33230 46190: \  
:paperSize="A1 portrait" 23350 32270: \  
:paperSize="A1 landscape" 33230 22390: \  
:paperSize="A2 portrait" 16390 22390: \  
:paperSize="A2 landscape" 23350 15430: \  
:paperSize="A3 portrait" 11470 15430: \  
:paperSize="A3 landscape" 16390 10510: \  
:paperSize="A4 portrait" 7990 10510: \  
:paperSize="A4 landscape" 11470 7030: \  
:paperSize="24 inches wide" 23984 0: \  
:paperSize="36 inches wide" 36176 0:
```