ECEN6263
Spring 2007

Design Project 0
No due date, no late penalty, no credit

Use the cadence tools to make an inverter similar to fig. 1.41b, p.32 in Weste and Harris. This project can be done by completing the inverter tutorial up to step 11. Your layout should resemble the layout at the end of the tutorial. We have not discussed all the layers and the spacing rules yet, but this should be more clear later.

Make the spacings and line widths as small as possible without making any design rule errors. Design rule errors will show up as white areas on top of the layers when you do a design rule check (DRC).

For compatibility with the automatic grader, you should use the following naming conventions. Note that underlines, "_", not periods, ".", are used in the names.

project directory: inverter_proj
library: inverter_lib (make sure the library path is changed to "./inverter_lib")
cell: inverter

In addition, you must attach the following terminal names on the circuit nodes as indicated (correct capitalization is important).

power: vdd
ground: gnd
input: IN
output: OUT

Your project directory must be encoded before it can be sent to the autograder. First change directory (with the cd command) into your top directory where "inverter_proj" is a subdirectory. Then type

encode inverter_proj

and you should see (with the ls command) the file "inverter_proj.enc" in addition to your "inverter_proj" directory. The "inverter_proj.enc" file will be sent to the grader where it is automatically decoded to produce a copy of your project directory and all subdirectories.

The help pages provided with the automatic grader make it self explanatory to use. To login to the grader use:

class name: ecen6263
ID: y*our class id*
password: *your password*

The “options” window should come up. In the pull down menu, select “select a project.” When the “project” window comes up, enter the project name

proj0

and select “submit a file.” In the “submit a file” window that comes up, enter for file name:

inverter_proj.enc

and in the “local file name” field, enter the “inverter_proj.enc” file with full path on your local computer (use the “browse” button if you want). Use the net browser “back” button to go back to the “project” window and select “test files.” You should wait a few minutes and then go back to the “project” window and select “show testing details” for a complete description of your grade and the reasons for it.