

## A simple method for layout simulation

We used to modify or/add the netlist or/and input.scs file for both schematic pre-layout and extracted post-layout simulation. There are at least two more methods for a more explicit and simpler way to do the simulation. The example is based on 651 homework 7, analog OTA simulation.

### Method 1

1. Finish schematic layout, make sure DRC and LVS clean. Then make a symbol from the schematic view. Create a new testbench cell view from the Library Manager by adding instance from the above symbol as shown in Fig 0.

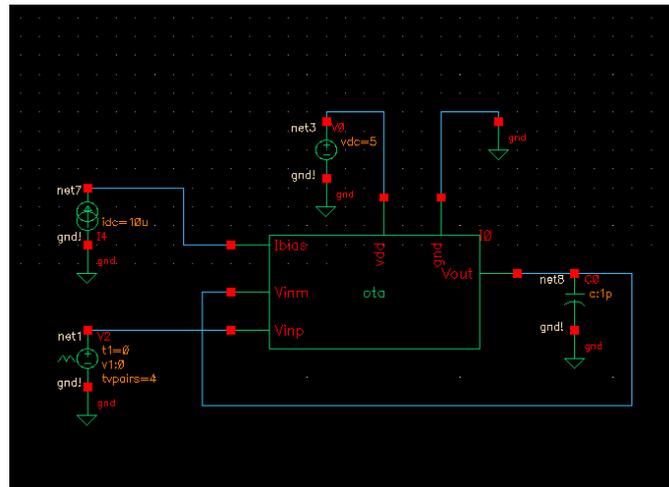


Fig.1 schematic testbench

2. From the **Library Manager**, choose **File** → **New** → **Cell View ...**
3. Choose **Tool Hierarchy Editor** to create a new cell view named **Config** by Cadence

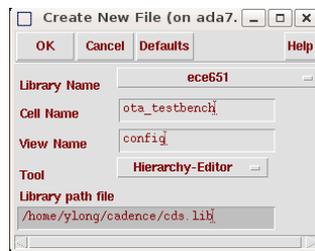


Fig.2 create a Config cell view

4. Click OK, the next window pop up.

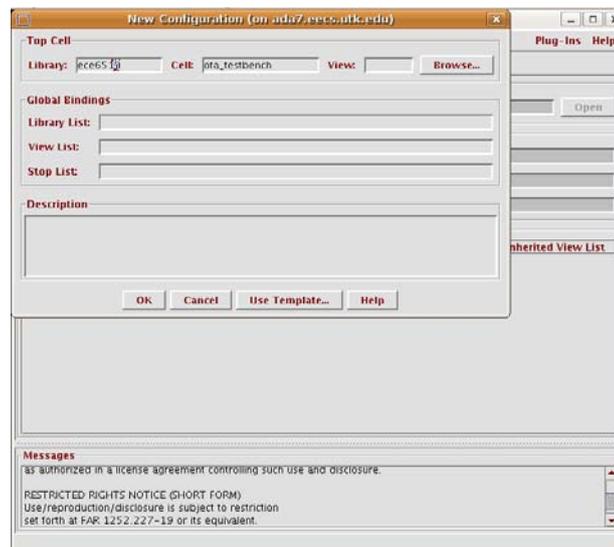


Fig.3 Configuration window

5. Click **Use Template...** , in the next window, choose the **Name** in the pull-down menu as **spectre**, click **OK**.

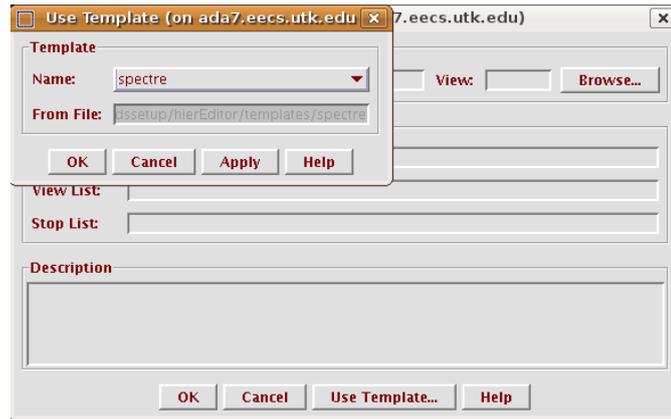


Fig.4 Template selection window

6. Then back to the Configuration window, select the **myView** in the **View:** blanket to **schematic** by typing “schematic”. Then click **OK**, and **Save** icon in the **Hierarchy editor** window.

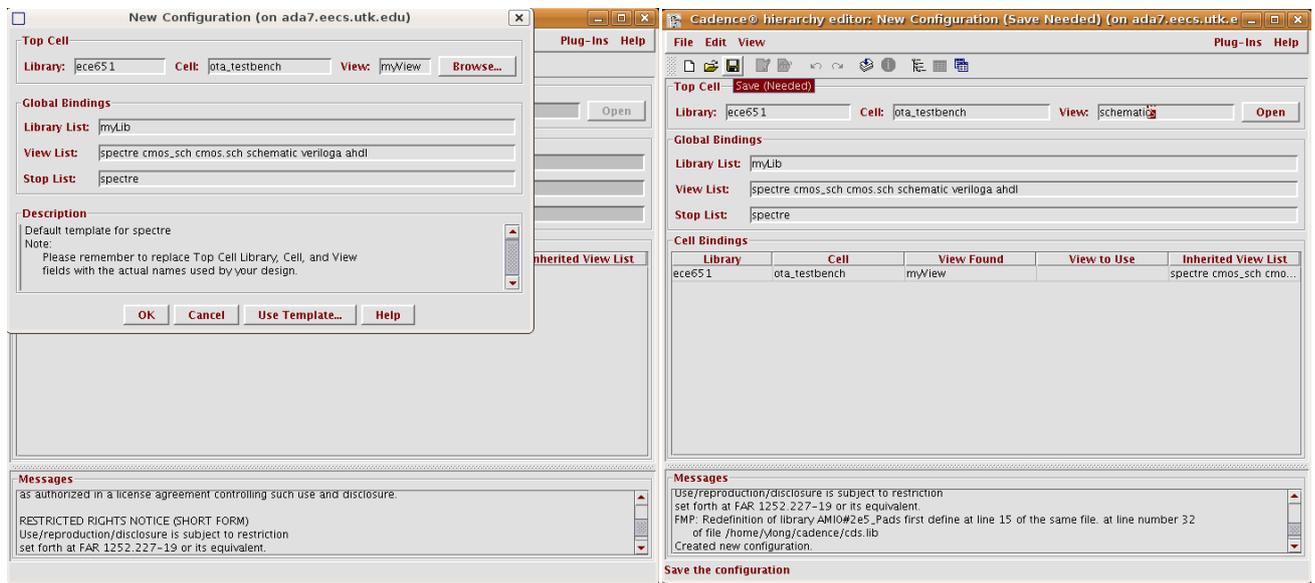


Fig.5 change myView to schematic

7. In the **Hierarchy editor** window, right click mouse on the schematic views to **Set Cell View** to be **extracted**.

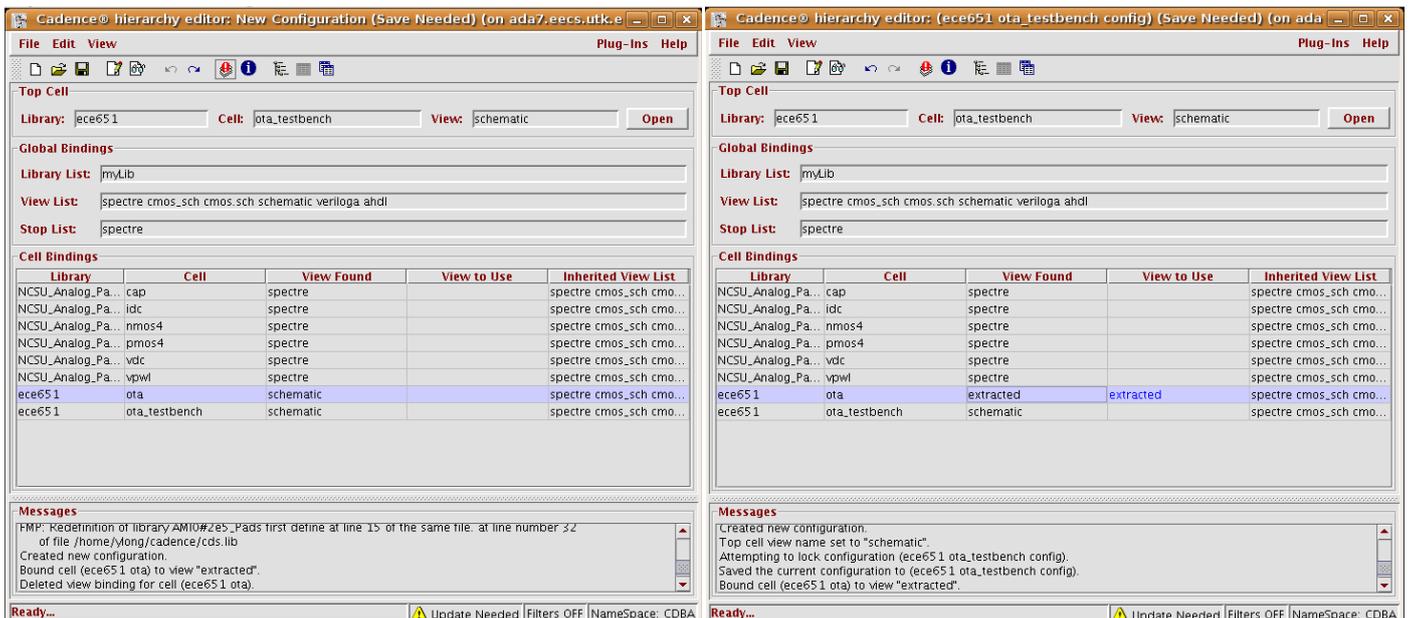


Fig.6 change cell View from schematic to extracted

- Click the **Save** icon in the **Hierarchy editor** window. Close the **Hierarchy editor** window.
- Then go back to the **Library Manager**, choose the newly created **Config** cell view. It looks like no difference from the original schematic testbench. If you press “x” to descend into the symbol, you will notice it changed to extracted cell view.

## Method 2

- This method is very simple! Just follow the normal procedure to initiate the **Analog Design Environment** to simulate the schematic view.
- In the **Analog Design Environment** window, choose **Setup → Environment...**, in the **Environment Option** window, type in **extracted** in front of the existing **schematic** of the Switch View List. Or you can simply replace the **schematic** by **extracted**.

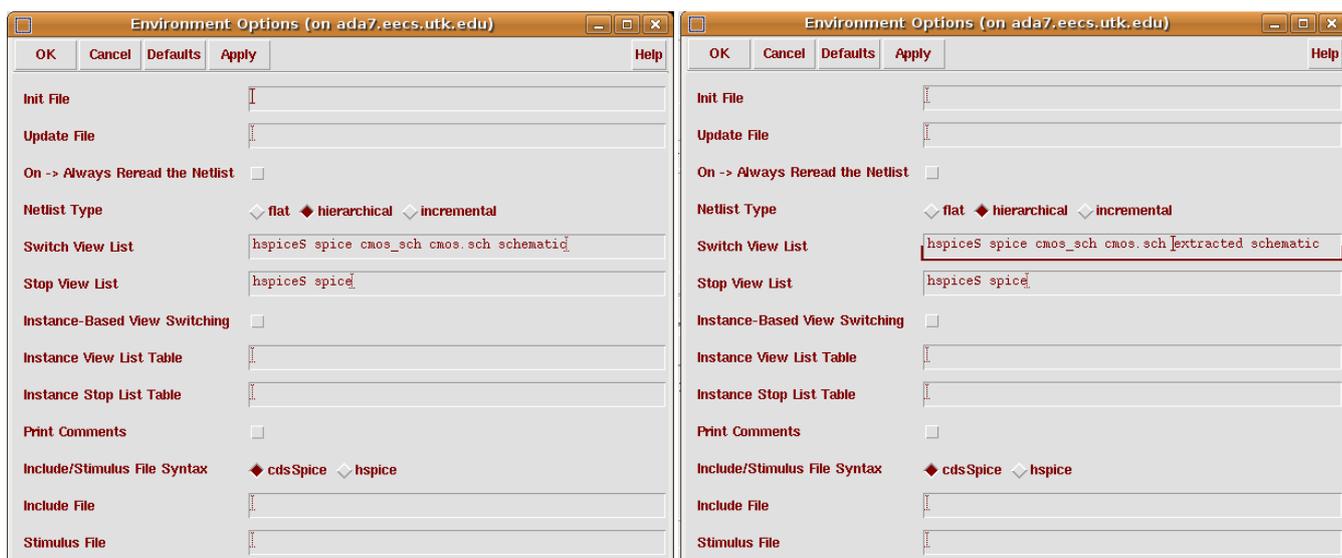


Fig.7 change Switch View List priority for extracted and schematic view

- Then go back to the original “schematic” testbench, if you press “x” to descend into the symbol, you will notice it changed to extracted cell view. This method temporarily change the cell view priority to extracted. Unless you save this change when existing the **Analog Design Environment**, it will not cause any change to the original schematic view cell.

*Special Thanks goes to:*

***Robert Greenwell***

***Kevin Tham***