Rules/Guidelines for Generating Package GDS and Bonding

Creating layer Map file

The Packaging Team requires the following Data For making the Bonding Diagram

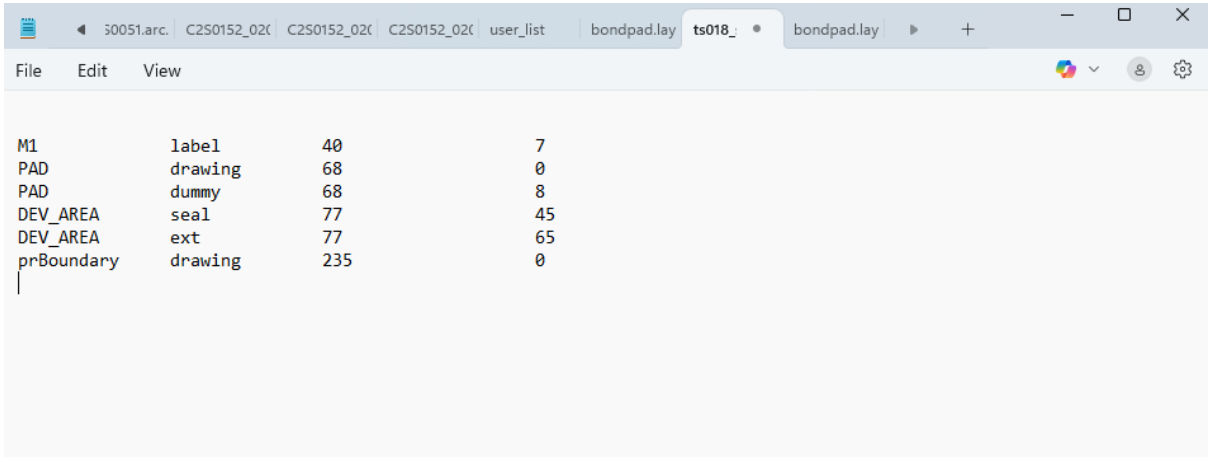
- Die Size
- IOPAD Coordinates
- Pad Names
- Silicon number location

For ensuring above requiring data to be present in Bonding diagram the following layers should be present in the layer Map file

- Metal 1 label
- DEV_AREA seal
- DEV_AREA ext
- PAD drawing
- PAD dummy
- PrBoundary drawing

Steps for creating layer map file for bond diagram

Open the sclpdk layer map file at location at "Project_directory/cds_master/SCLSL18_4M1L/ts018_scl_prim/ts018_scl_prim.layermap" in notepad and copy only the required layers to new file as shown figure below and Save the file as "bondpad.layermap"



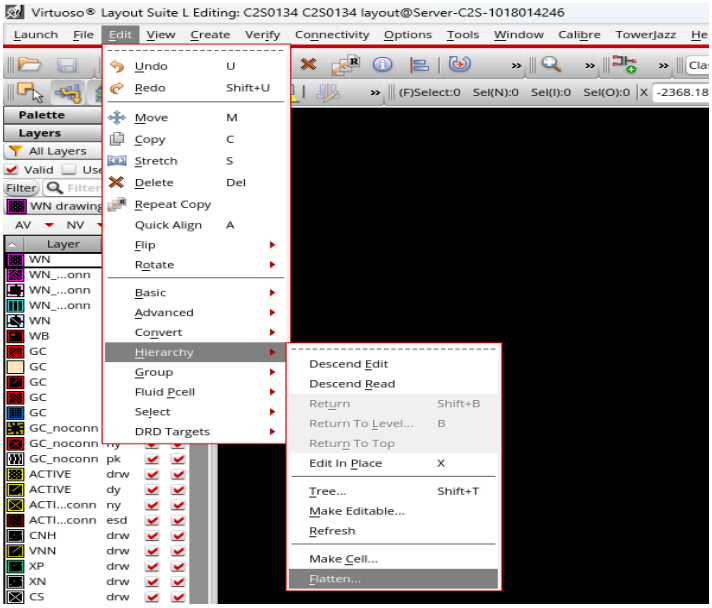
Note: Layer Map file for 6M1L and 4M1L for bond pad diagram generation is same ,ChipIN will provide layer map file for bond diagram generation ,use that "bondpad.layermap" file for the steps below or proceed with the layermap file created from above steps.

Exporting the layout to Bond pad GDS.

Open the Topcell layout in Layout Suite XL and follow the steps mentioned below

Step 1: Flattening the hierarchy

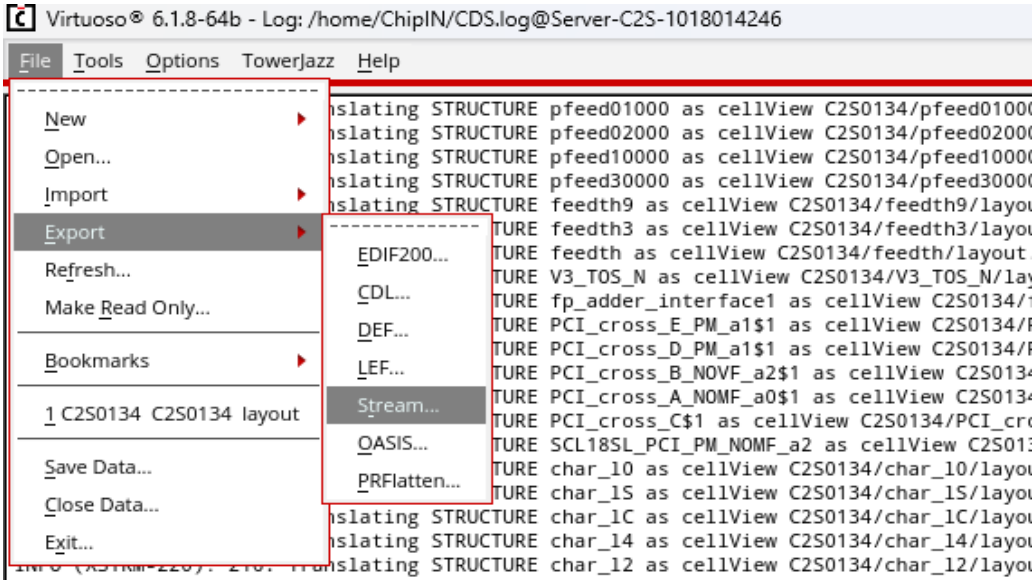
- To flatten the hierarchy click on Edit->Hierarchy->Flatten and following the following window will be opening up in layout viewer.



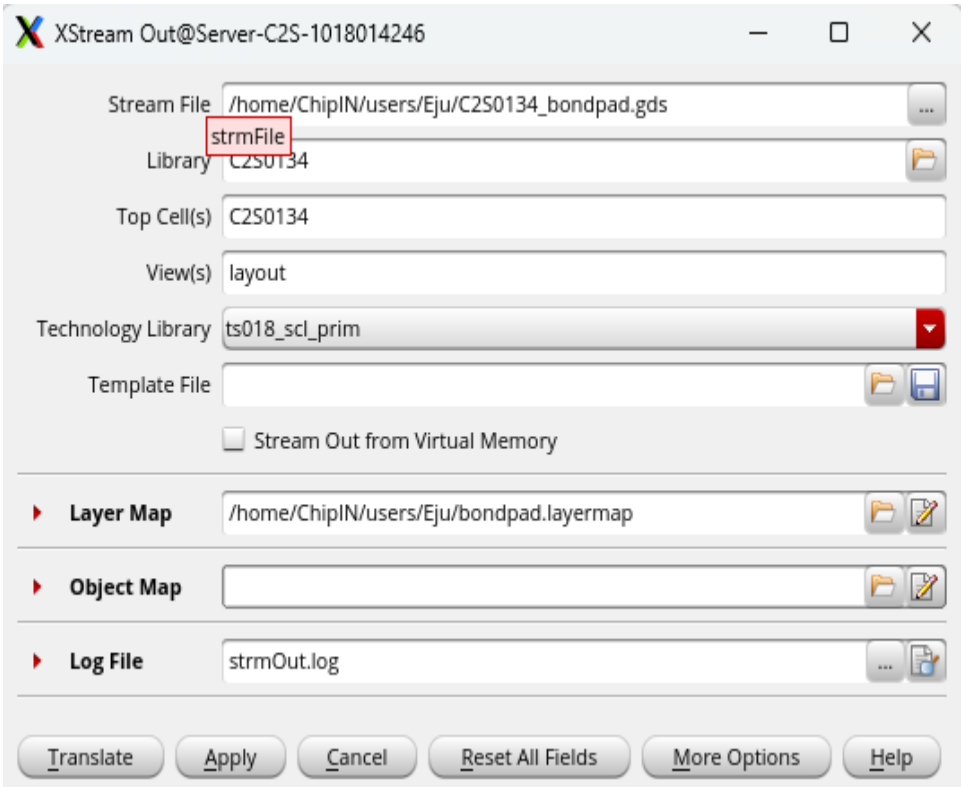
- Select Hierarchy level as displayed levels and click ok .

Step 2: Exporting the layout

- For exporting layout go to CIW window and click on File ->Export ->Stream and the following window will popup..

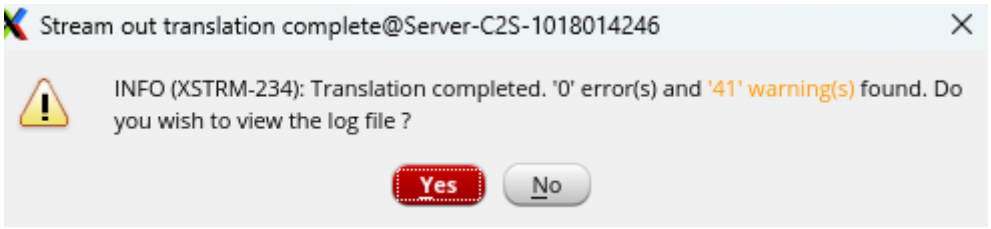


- Make the following changes and click on translate



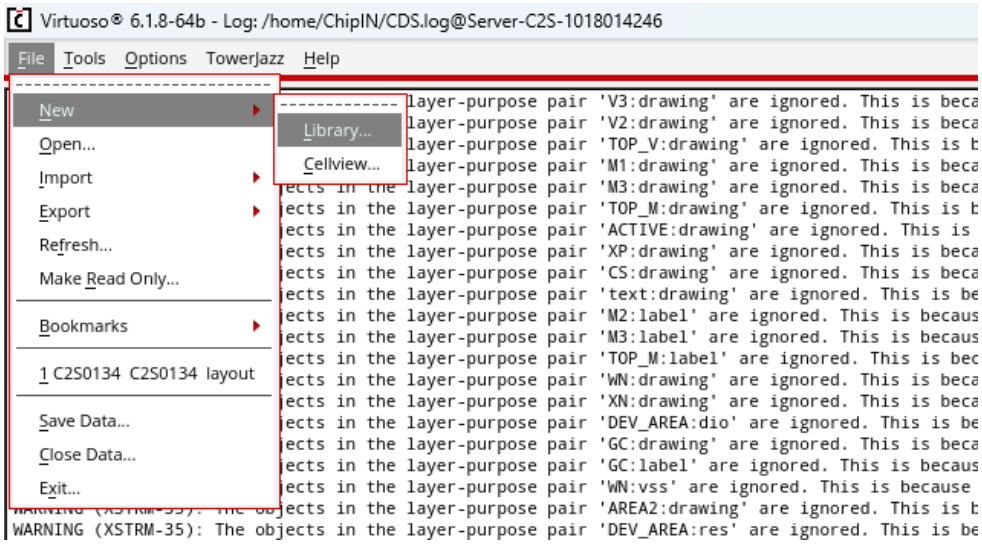
- ❖ In stream file Give the location and name in which gds should be exported
- ❖ Select the technology library as ts018_scl_prim
- ❖ Layer map file select the created/shared layer map file for bond pad generation
- ❖ Object map field should be kept as blank.

- After the export is completed the following window will pop up and click on NO

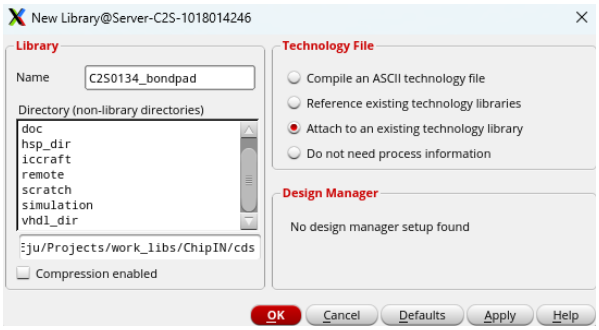


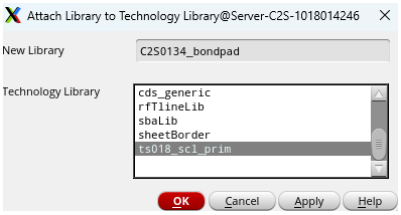
Step 3: verify the whether Bond pad is generated successfully

- Create a new library named Silicon number_bond from CIW Window by clicking New ->library and the following window will popup .

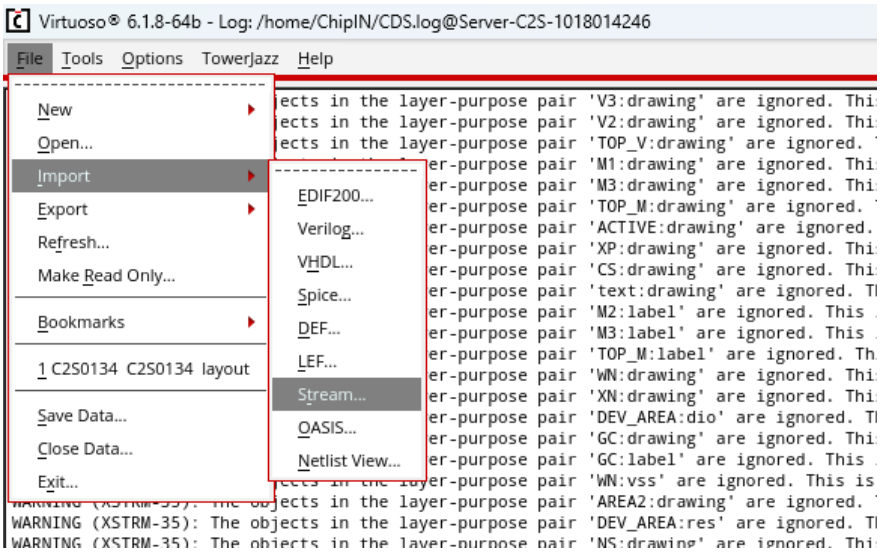


- Click on attach to existing technology and in next window select ts018_scl_prim .

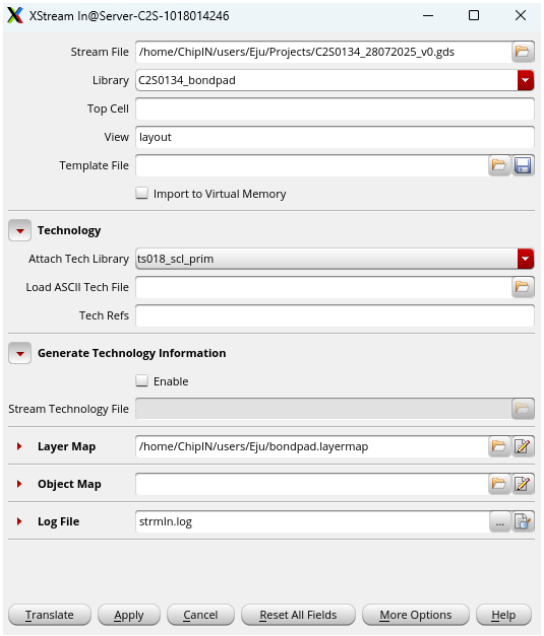




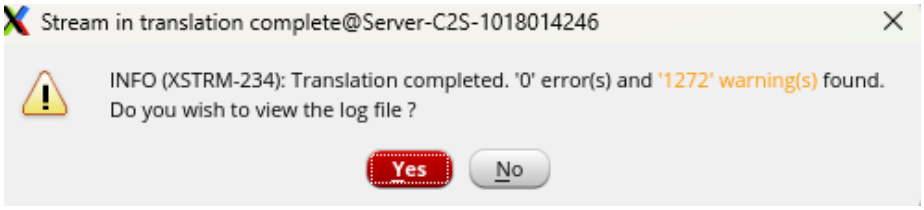
- For importing The bond pad gds In CIW window select File->Import->Stream



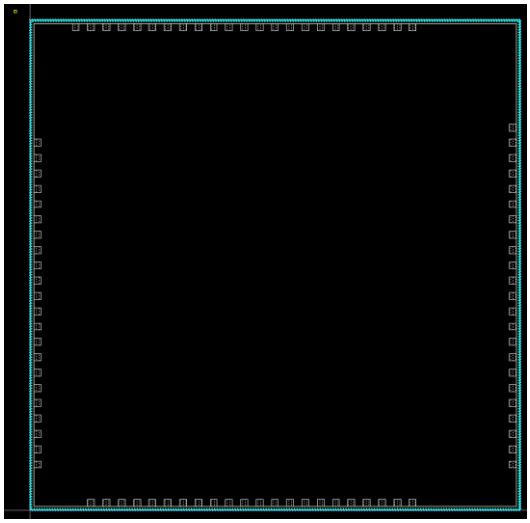
- Make the following changes in Popup window and click on translate .
- ❖ Stream file -Select GDS to be Imported.
- ❖ Library-Select the library to which we needed to import (silicon_number_bondpad) the design.
- ❖ Attach Tech library- ts018_scl_prim.
- ❖ Layer Map- Select the bondpad layer map file we created .
- ❖ Make object map file as Blank .

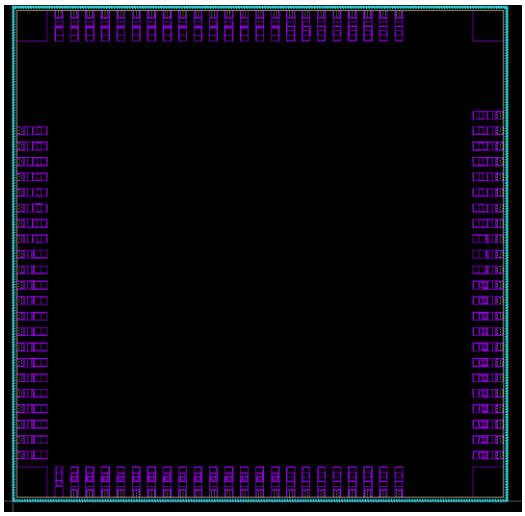


- After the completation of importing the following window will open up and click on No.



- Open the imported GDS for library and the layout with information of Bond pad openings ,seal rings and silicon number coordinates can be scene





(a)Layout without enabling Visibility of PR Boundary b) Layout with PR Boundary Visibility

Note: Position of IOPad placement will be different according to Layout .