



Dolphin Technology

DLayout_User_Guide

DLayout Setting Guide

User Guide

Revision 1.10

27 September 2023



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REVISION HISTORY

Revision	Date	Description of Changes
1.0	09-27-23	Initial



1. DLayout installation

Download installation files from link below:

https://drive.google.com/drive/u/0/folders/1W1LABqh6fRITzYDIno807LsVJPhX1_KN

Double click on the .exe file to select installation path and start the installation.

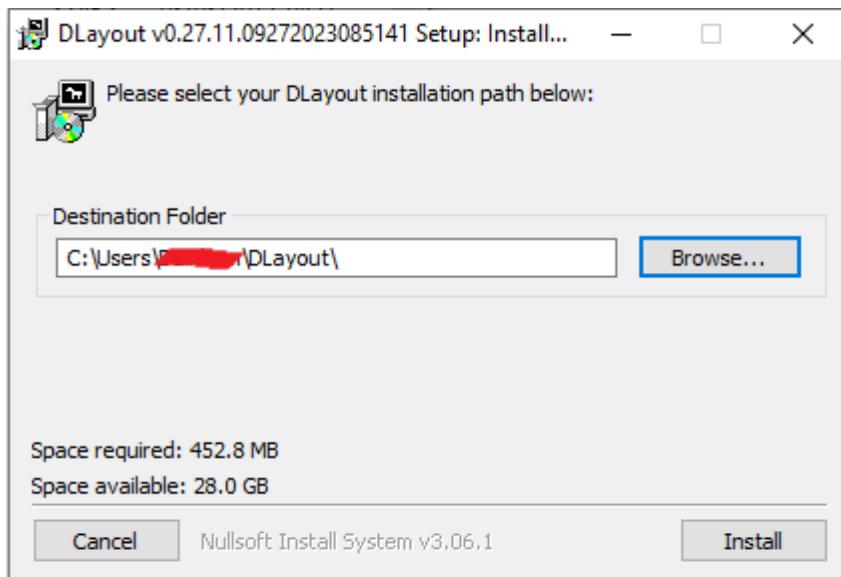


Figure 1. DLayout Installation

After the installation finished go to “Start menu” to open the DLayout_init tool for first time, this is necessary to setup something before using.

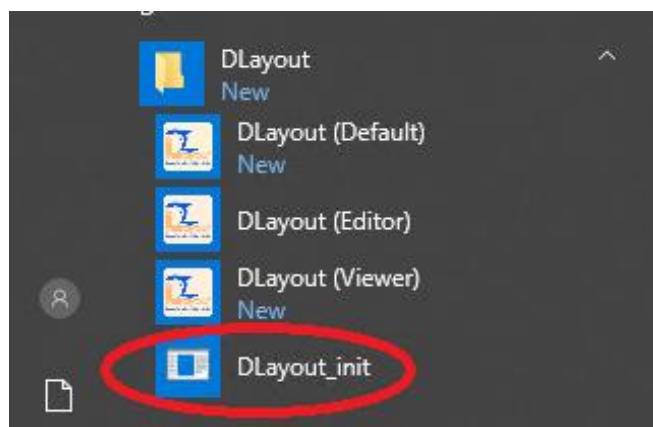


Figure 2. DLayout initial



Open DLayout (Editor), tool will request license for first time, you need to get the license from attached file and put here.

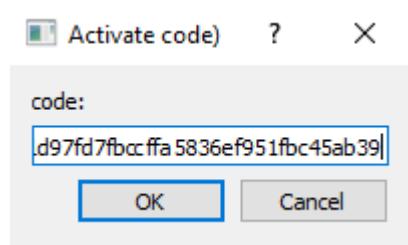


Figure 3. Active DLayout



2. Run LVS/DRC macro on DLayout

1. Draw new layout or open a existed layout file(GDSII file) that you want to check(drc/lvs) first.

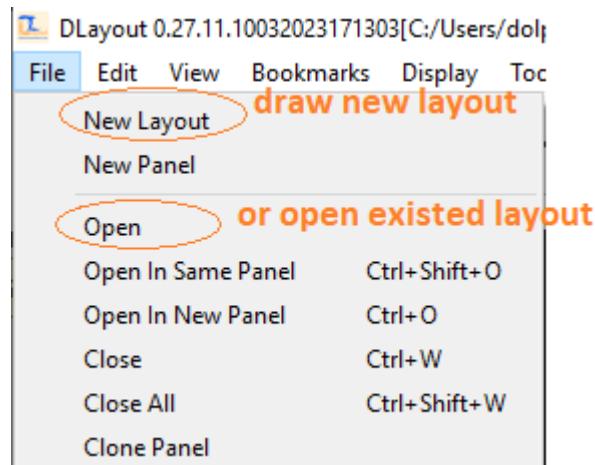


Figure 4. Create new layout or open existed layout

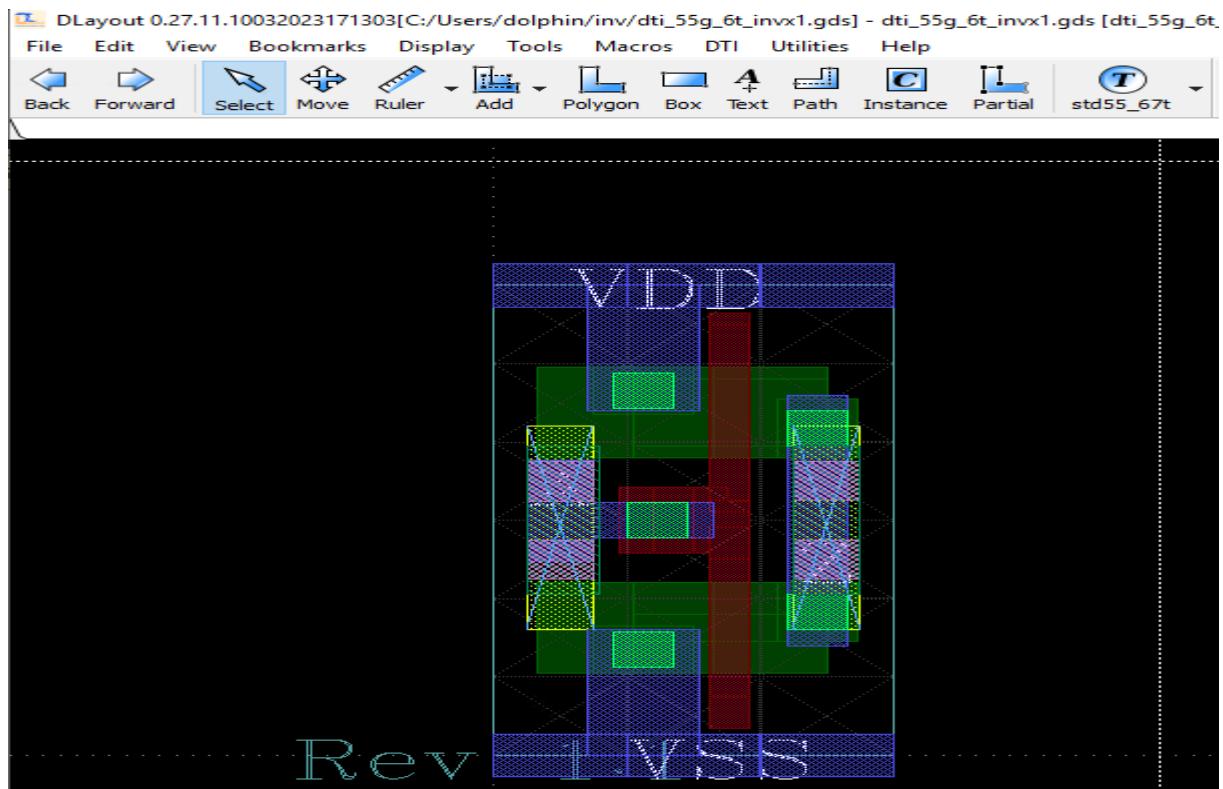


Figure 5. Open a layout file



2. Go to Macros -> Macro Development(F5)

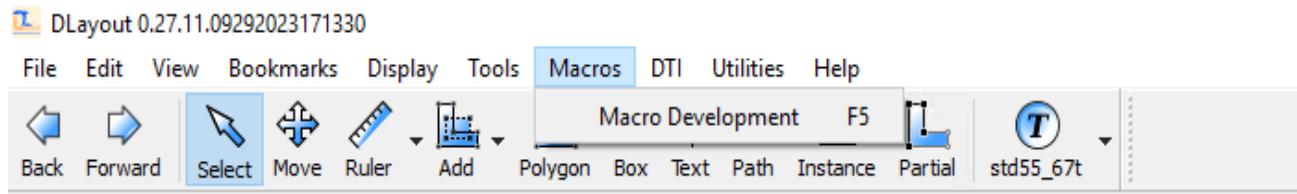


Figure 6. Open Macro window

Do like picture below to run DRC checking.

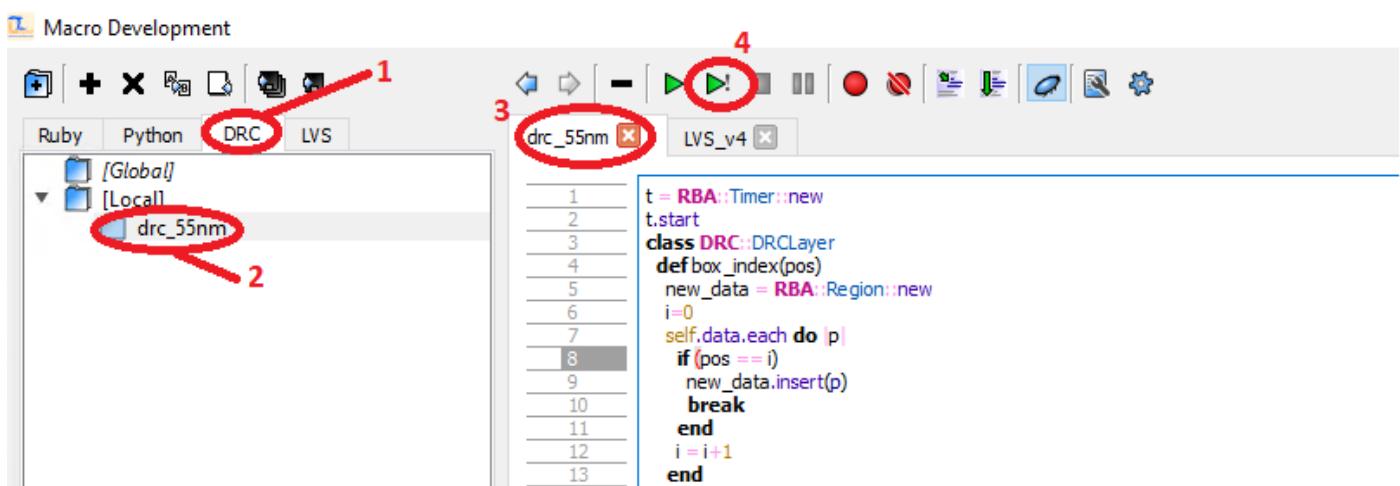


Figure 7. Run DRC

Result of checking DRC:

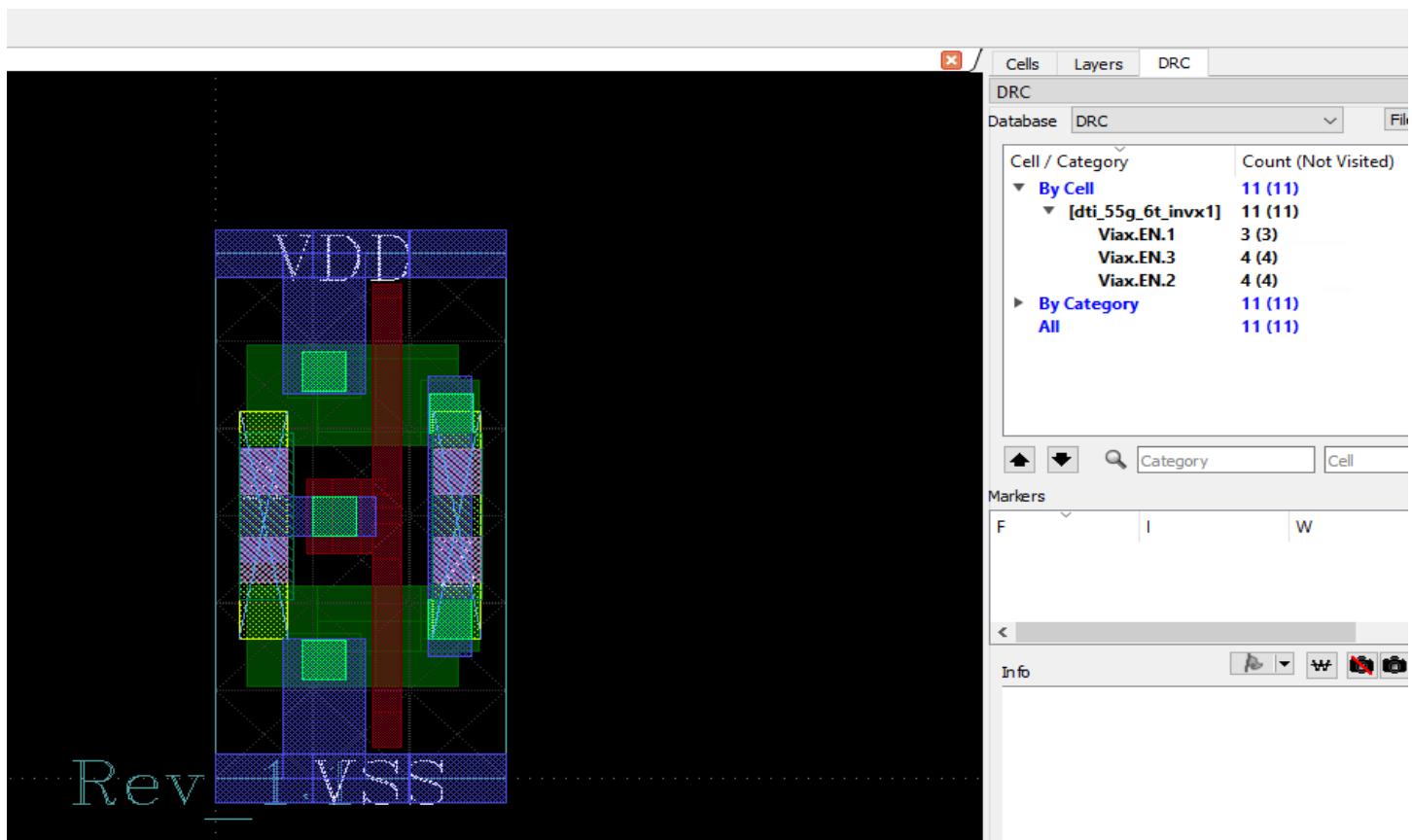


Figure 8. Result of DRC

It is same, go to LVS tab to run LVS checking(note: please put the ckt of the cell same with GDS file).

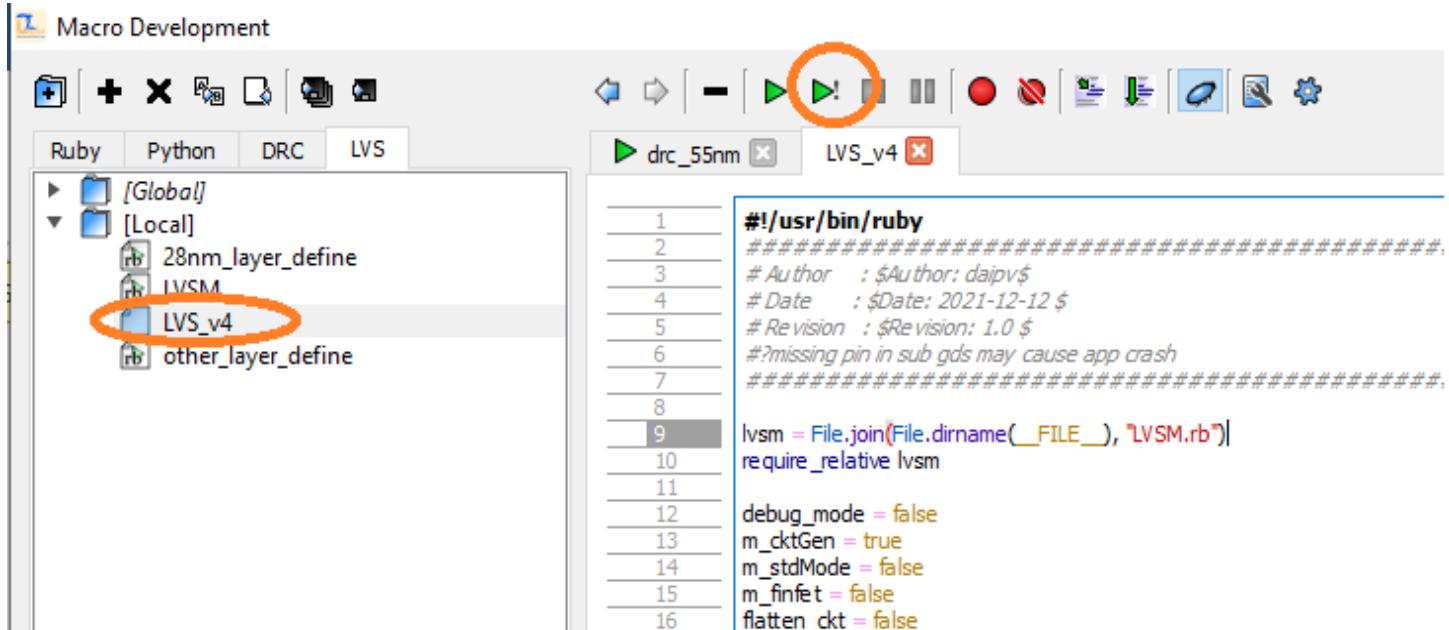


Figure 9. Run LVS

Result of LVS checking:

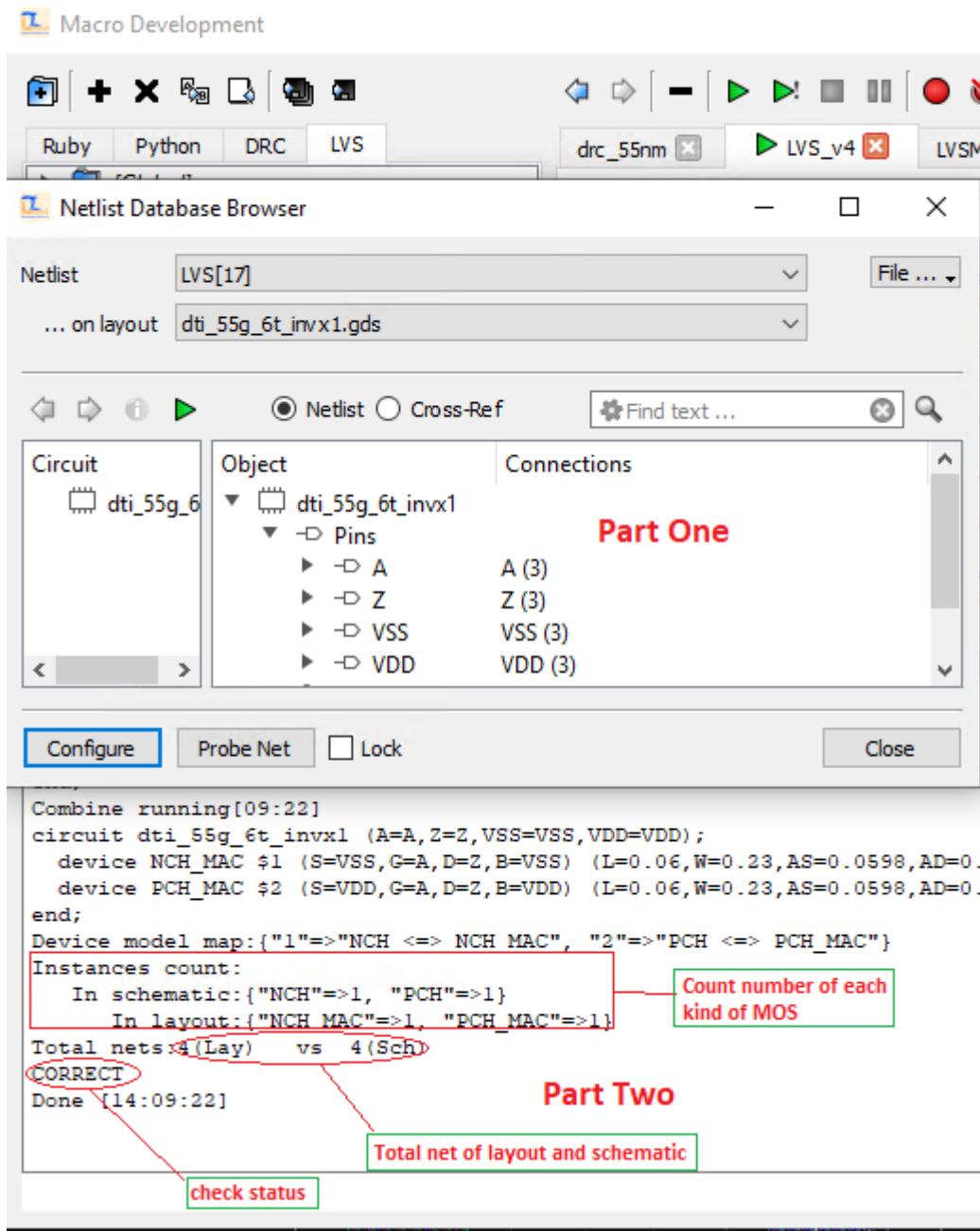


Figure 10. Result of LVS

Note: “**Part One**” show detail of result, “**Part Two**” show summary of LVS checking. In the summary part will show you check status of the cell is:

- CORRECT: mean the cell is good check.
- INCORRECT: mean connectivity of the cell is incorrect.
- PROPERTY ERROR: connectivity of cell is correct but property of device is not correct



3. Shortcut

shortcut	Name	Description
Ctrl + O	open in new panel	Open file on another tab
3	Clear all rulers and annotations	Clear ruler marker and annotations
\	properties	Show properties of selected object on a sub-window
8	Horizontal split	Split selected shapes into two pieces in the horizontal direction
9	Vertical split	Split selected shapes into two pieces in the vertical direction
1	Nibble split	take small bites out of selected shapes
5	Select all	Select all objects (instances, boxes, polygons, texts) on the opening cell
2	Merge all shapes	Merge selected shapes that have same layer together
=	Duplicate	Make a copy of selected objects
M	Move by	Move selected objects by a known distance.
N	copy active cell	Get name of opening cell
R	Rotate counterclockwise	Rotate selected objects by counterclockwise
V	Flip vertically	Flip selected objects by horizontal axis
H	Flip horizontally	Flip selected objects by vertical axis
F1	cut same struct	don't use
F2	Vertical flip cell	Flip selected objects by horizontal axis
F3	get GDS	don't use
S	Save as	Save file to another path



Ctrl + U	flatten instance	Flatten selected instances
Y	change layer	Change layer
C	Deep copy	Copy the selected cell in hierarchy panel to clipboard
P	import GDS	Import cell that is in clipboard to layout
O	&open cell	Open the reference cell of the selected instance
I	&insert instance	Insert new instance of a reference cell
T	Trace net	Open "Net Tracer" window
0	box	Draw new box with selected layer
Shift + R	rename cell	Rename cell
Ctrl + C	shallow copy	Make a copy of selected objects and save to clipboard
Ctrl + V	Paste	Insert objects that are in clipboard to the opening cell
F10	Export not check	Export the opening cell
	Export cell in topcell active	Export all cells in the layout
	rename cell in allcell	Rename for many cells at the same time
;	Marker browser	Remove DRC marker
,	Back DRC error	Go back one
.	next DRC error	Go next one
,	Marker browser and load default	Load DRC log for opening cell