

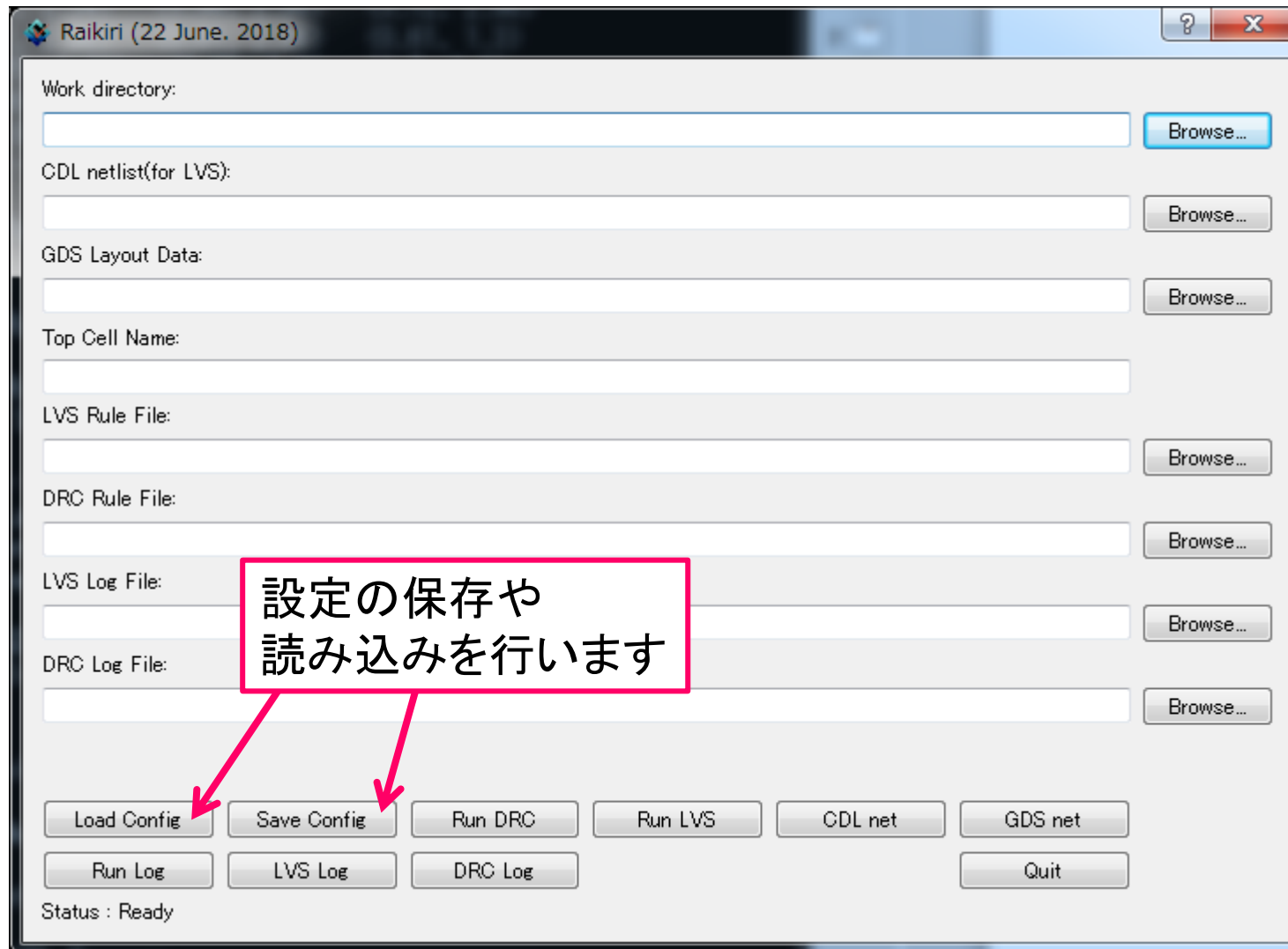
LVS/DRCマスク検証ツール 雷切(らいきり:Raikiri)

有限会社アナロジスト

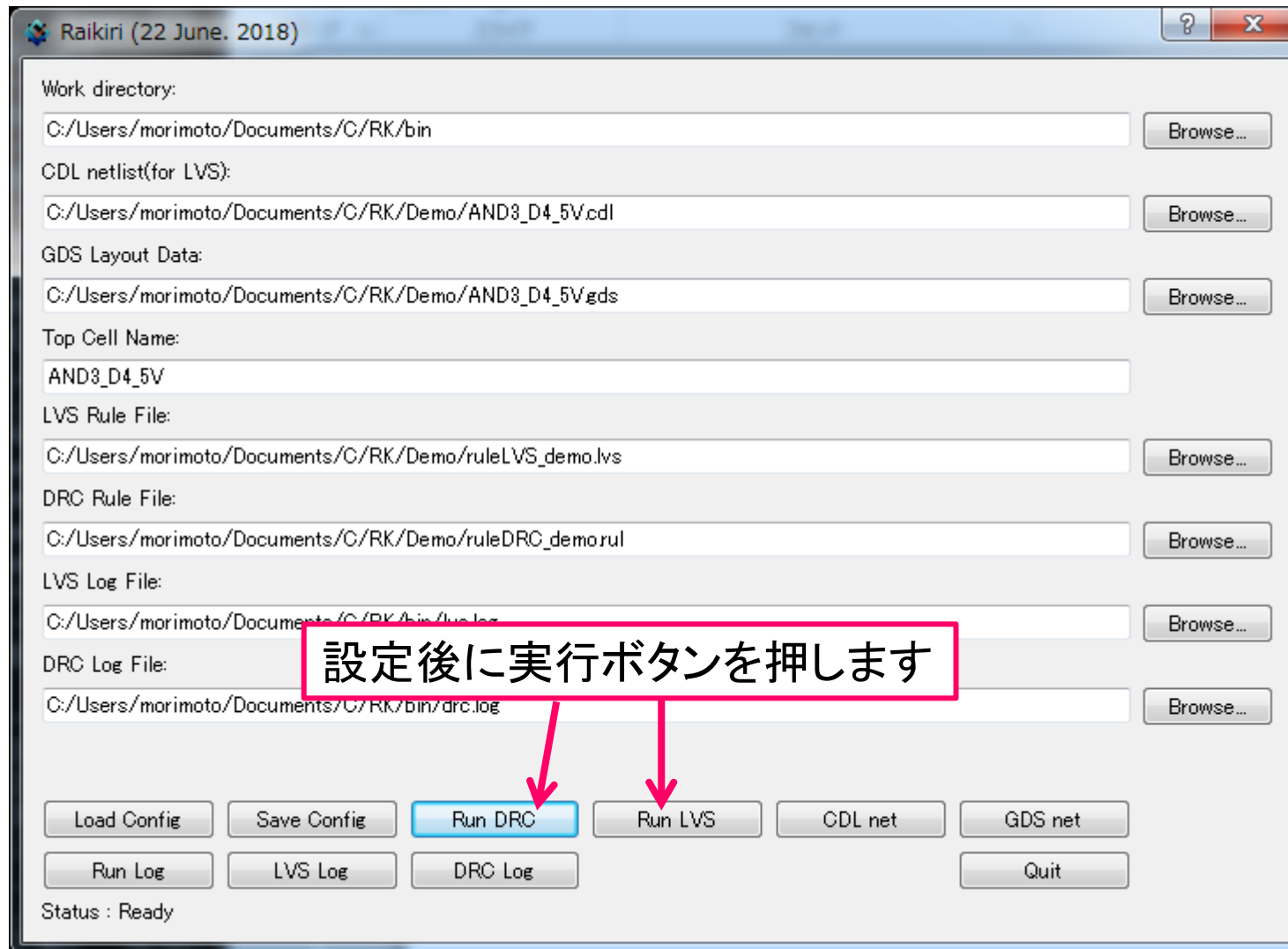
Raikiriの概要

- 多くのファウンドリが提供する標準的なルールファイルが使用可能
- トラブルとなりがちなスクリプト変換を介さない直接実行
- 簡易的な疑似処理ではないフル処理
- 高速実行
- 価格を大幅に抑えた提供

GUIモード起動画面



LVS/DRC実行



LVS実行結果

一致箇所は回路図ネット情報が
レイアウトネット情報にコピーされます

The screenshot displays the results of an LVS (Layout Versus Schematic) comparison. It features three main windows: 'CDL Netlist', 'GDS Netlist', and 'LVS Log'. A pink box highlights the text '一致箇所は回路図ネット情報がレイアウトネット情報にコピーされます' (Consistent parts are copied from circuit diagram netlist information to layout netlist information), with arrows pointing to the corresponding lines in the CDL and GDS netlists. The 'LVS Log' window shows the execution results, including device and net statistics.

```
CDL Netlist
SUBCKT AND3_D4_5V A0 A1 A2 VDD VSS Y
MM2/XM5 NET23 A2 VSS VDD XF W=1.2U L=550N M=1
MM1/XM5 NET23 A2 VSS VSS ND W=1.2U L=550N M=1
MM2/XM7 NET023 A0 NET034 VDD XF W=1.2U L=550N M=1
MM1/XM7 NET023 A0 NET034 VSS ND W=1.2U L=550N M=1
MM2/XM6 NET034 A1 NET23 VDD XF W=1.2U L=550N M=1
MM1/XM6 NET034 A1 NET23 VSS ND W=1.2U L=550N M=1
MM2/XM9 Y NET023 VSS VDD XF W=680N L=550N M=2
MM1/XM9 Y NET023 VSS VSS ND W=680N L=550N M=2
MM8 Y NET023 VDD VDD PD W=1.8U L=600N M=2
MM4 NET023 A2 VDD VDD PD W=1.2U L=600N M=1
MM3 NET023 A1 VDD VDD PD W=1.2U L=600N M=1
MM0 NET023 A0 VDD VDD PD W=1.2U L=600N M=1
ENDS
END

GDS Netlist
SUBCKT A0 A1 A2 Y VDD VSS
MM2/XM7 A0 NET034 NET023 VDD XF W=1.2U L=550N
MM2/XM6 A1 NET034 NET23 VDD XF W=1.2U L=550N
MM2/XM5 A2 VSS NET23 VDD XF W=1.2U L=550N
MM2/XM9 NET023 Y VSS VDD XF W=1.36U L=550N
MM1/XM7 A0 NET034 NET023 VSS ND W=1.2U L=550N
MM1/XM6 A1 NET034 NET23 VSS ND W=1.2U L=550N
MM1/XM5 A2 VSS NET23 VSS ND W=1.2U L=550N
MM1/XM9 NET023 Y VSS VSS ND W=1.36U L=550N
MM0 A0 VDD NET023 VDD PD W=1.2U L=600N
MM0 A1 VDD NET023 VDD PD W=1.2U L=600N
MM0 A2 VDD NET023 VDD PD W=1.2U L=600N
MM0 Y VDD NET023 VDD PD W=3.6U L=600N

LVS Log
===== Device Statics =====
Device = MN(ND) : Schematic count = 4 Layout count = 4
Schematic Error count = 0 Layout Error count = 0

Device = MP(PD) : Schematic count = 4 Layout count = 4
Schematic Error count = 0 Layout Error count = 0

Device = M(XF) : Schematic count = 4 Layout count = 4
Schematic Error count = 0 Layout Error count = 0

===== NET Statics =====
Schematic NET Count = 9 Layout NET Count = 9
Schematic Error NET Count = 0 Layout Error NET Count = 0
```

DRC実行結果

ログボタンを押すと結果が表示されます

Work directory:
C:/Users/morimoto/Documents/C/RK/bin

CDL netlist(for LVS):
C:/Users/morimoto/Documents/C/RK/Demo/AND3_D4_5V.cdl

GDS Layout Data:
C:/Users/morimoto/Documents/C/RK/Demo/AND3_D4_5Vgds

Top Cell Name:
AND3_D4_5V

LVS Rule File:
C:/Users/morimoto/Documents/C/RK/Demo/rule/lvs_demo.lvs

C:/Users/morimoto/Documents/C/RK/Demo/rule/DRC_demo.rul

C:/Users/morimoto/Documents/C/RK/bin/lvs.log

DRC Log File:
C:/Users/morimoto/Documents/C/RK/bin/drc.log

Buttons: Load Config, Save Config, Run DRC, Run Log, LVS Log, DRC Log

Status: Ready

DRC Log

DRA16P63 "LVDNW EDGE MUST BE ENCLOSED BY NW" [2201] [2203] [151] [152]
DRA16P63 : Derived Count = 1

(7.54, 3.24) (4.02, 3.24) (4.02, 3.5) (0, 3.5) (0, -0.02)
(7.54, -0.02) (7.54, 3.24)

DRA16G63 "N+ GUARDRING DIFF IS NECESSARY IN LVDNW" [220] [220M]
DRA16G63 : Derived Count = 1

(0, -0.02) (7.54, -0.02) (7.54, 7.02) (0, 7.02) (0, -0.02)

SIZNP63 "GENERATED DUE TO RESIZING OF NSD" [L.O]
SIZNP63 : Derived Count = 1

(6.62, 3.24) (5.55, 3.24) (5.55, 2.67) (5.86, 2.67) (5.86, 2.46)
(5.55, 2.46) (5.55, 2.67) (5.55, 3.24) (4.79, 3.24) (4.79, 2.46)
(4.7, 2.46) (4.7, 2.34) (3.98, 2.34) (3.98, 2.86) (3.72, 2.86)
(3.72, 3.5) (0.92, 3.5) (0.92, 2.86) (0.61, 2.86) (0.61, 1.3)
(0.94, 1.3) (0.94, 1.18) (3.65, 1.18) (3.65, 1.3) (4.7, 1.3)
(4.7, 1.18) (6.86, 1.18) (6.86, 1.3) (7.19, 1.3) (7.19, 2.34)
(6.86, 2.34) (6.86, 2.46) (6.62, 2.46) (6.62, 3.24)

DRR2163 "MIN SPACE BETWEEN TWO NSD REGIONS. MERGE IF THE SPACE IS LESS THAN 0.44um" [402]
DRR2163 : Derived Count = 2

(5.55, 2.67)

(5.86, 2.67)