



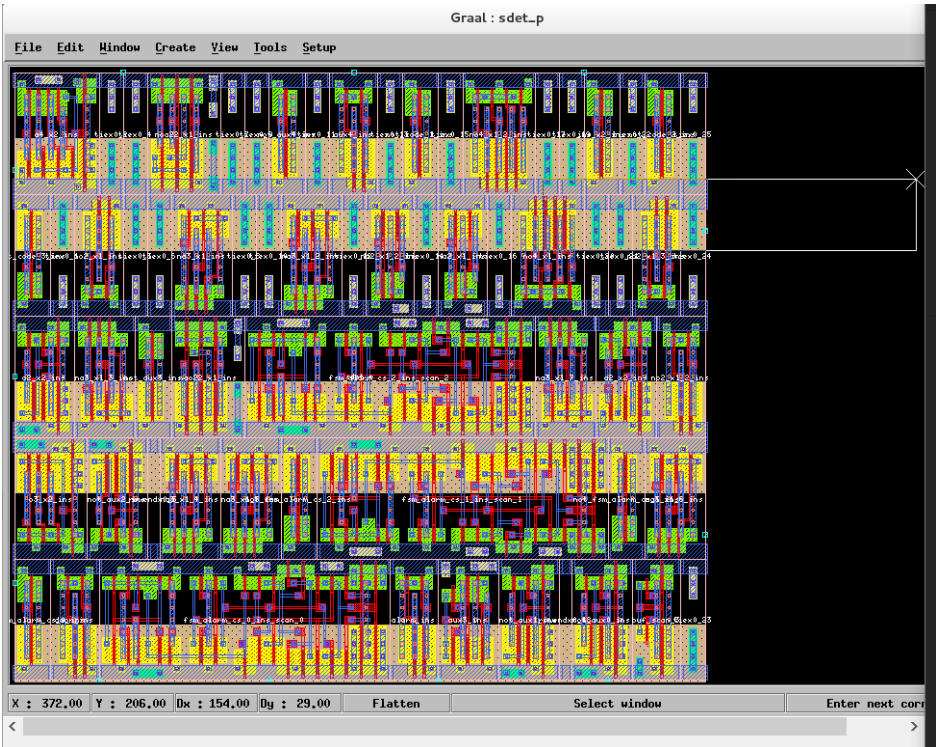
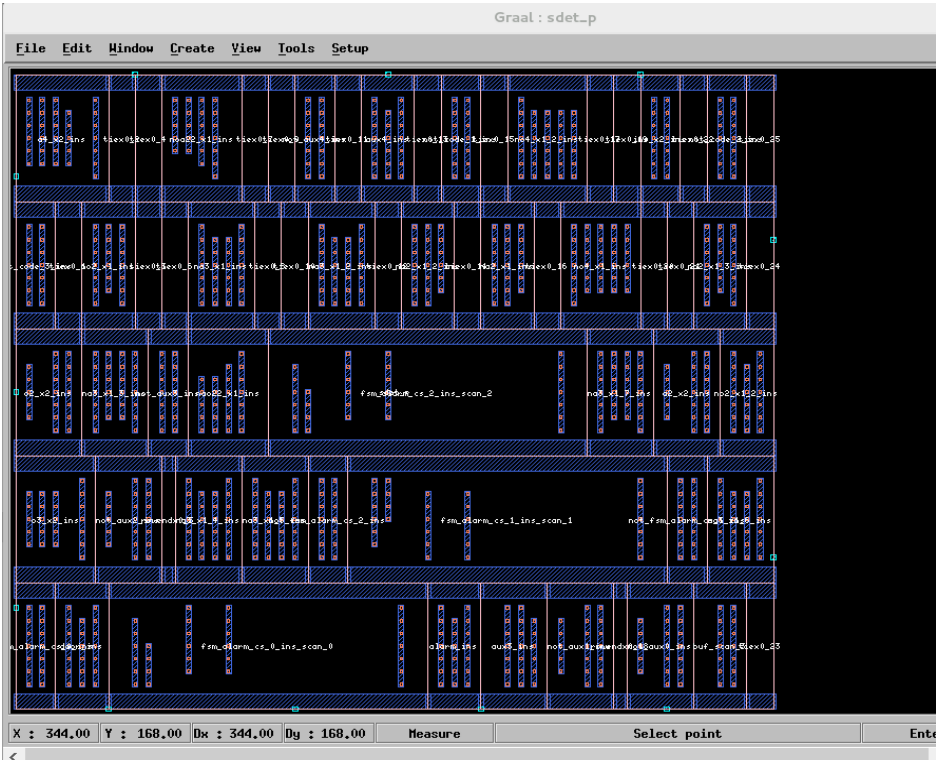
DIGITAL ACCESS CONTROL

COURSE: CSE 225

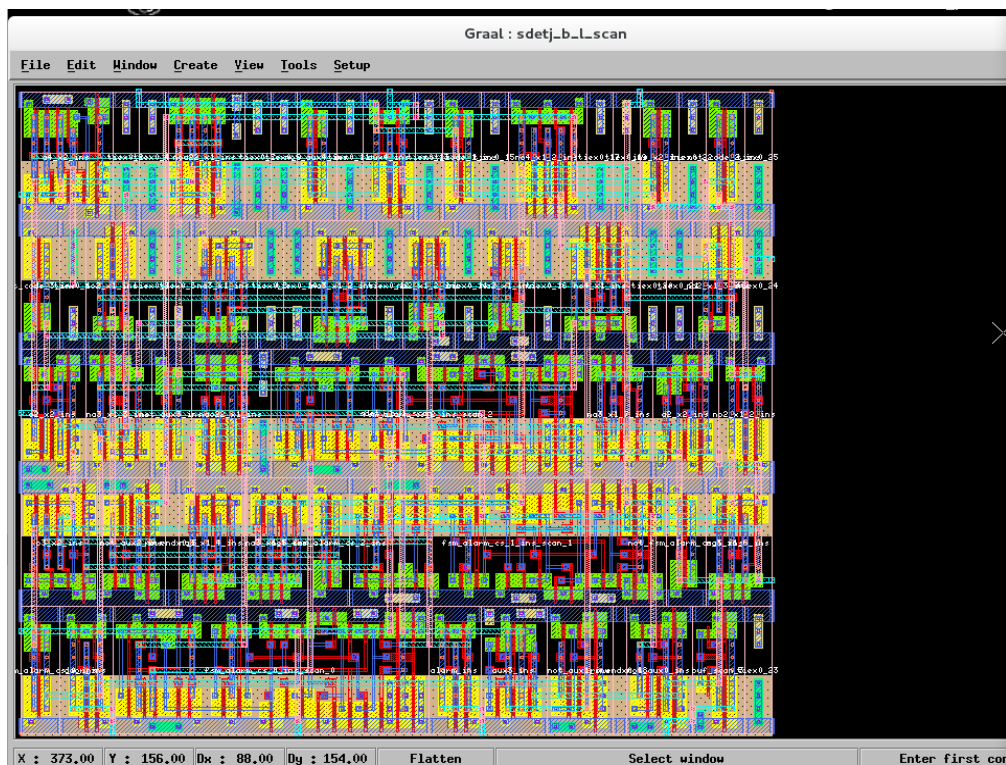
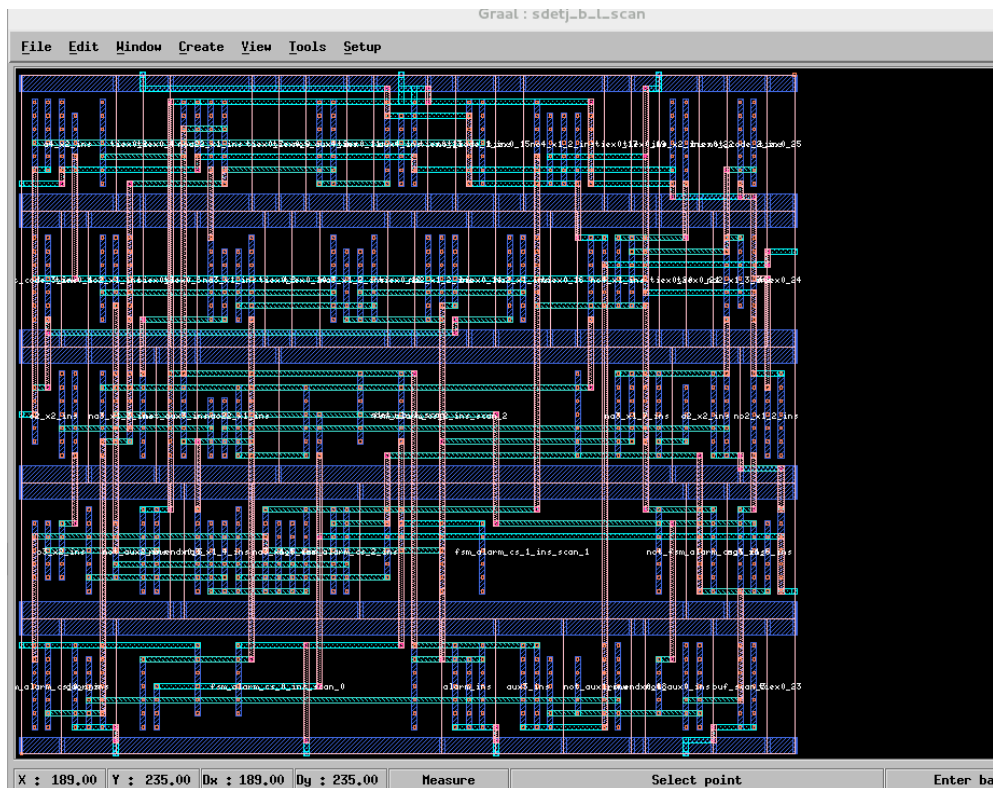


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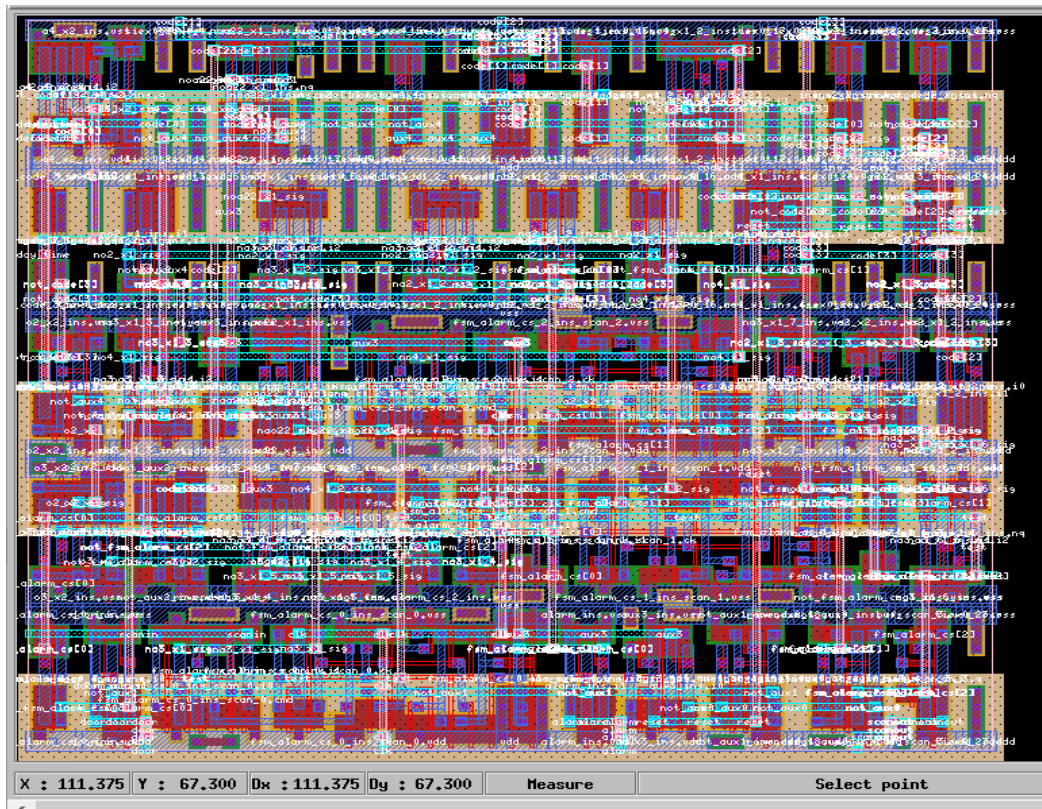
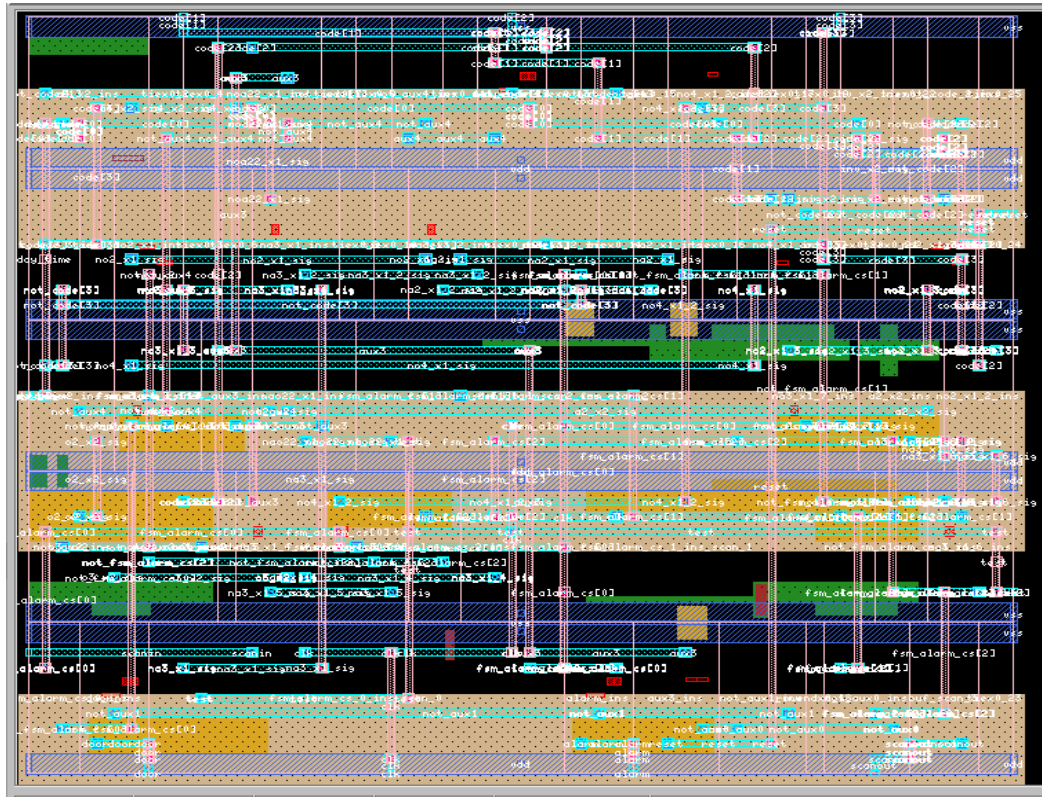
Placement



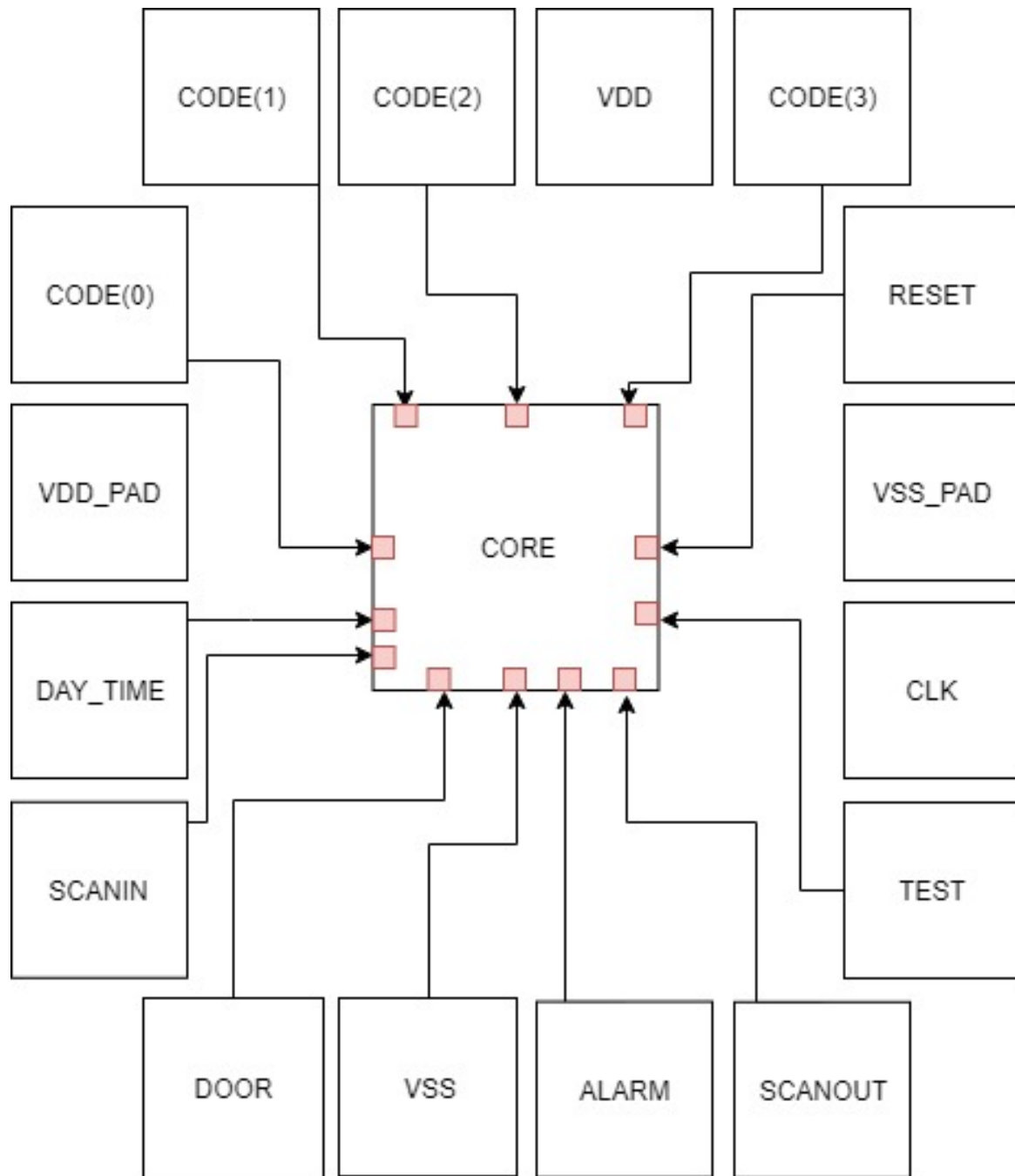
Routing



Final cif layout



Floorplan



MakeFile

```
#-----Sdet-----#

all: sdeta.vbe \
    sdetj.vbe \
    sdetm.vbe \
    sdeto.vbe \
    sdetr.vbe
    @echo "<-- Generated"

#-----Finite State Machine Synthesis-----#

vhd_to_fsm:
    rename .vhd .fsm *.vhd

sdeta.vbe: sdet.fsm
    @echo "    Encoding Synthesis -> sdeta.vbe"
    syf -CEV -a sdet

sdetj.vbe: sdet.fsm
    @echo "    Encoding Synthesis  -> sdetj.vbe"
    syf -CEV -j sdet

sdetm.vbe: sdet.fsm
    @echo "    Encoding Synthesis  -> sdetm.vbe"
    syf -CEV -m sdet

sdeto.vbe: sdet.fsm
    @echo "    Encoding Synthesis  -> sdeto.vbe"
    syf -CEV -o sdet

sdetr.vbe: sdet.fsm
    @echo "    Encoding Synthesis  -> sdetr.vbe"
    syf -CEV -r sdet

#-----Clean Up-----#

clean :
    rm -f *.vbe *.enc *~
    @echo "Erase all the files generated by the makefile"

#-----BOOM-----#
```

```

sdet_boom: sdeta_b.vbe sdetj_b.vbe sdetm_b.vbe sdeto_b.vbe sdetr_b.vbe

%_b.vbe: %.vbe
    @echo "      Boolean Optimization  -> $@"
    boom -V -d 50 $* $_b > $_boom.out

#-----BOOG-----#

sdet_boog: sdeta_b.vst sdetj_b.vst sdetm_b.vst sdeto_b.vst sdetr_b.vst

%_vst: %.vbe paramfile.lax
    @echo "      Logical Synthesis  -> $@"
    boog -x 1 -l paramfile $* > $_boog.out

#-----LOON-----#

sdet_loon: sdeta_b_1.vst sdetj_b_1.vst sdetm_b_1.vst sdeto_b_1.vst sdetr_b_1.vst

%_1.vst: %.vst paramfile.lax
    @echo "      Netlist Optimization  -> $@"
    loon -x 1 $* $_1 paramfile > $_loon.out

#-----Flatbeh&Proof-----#

%_b_1_net.vbe: %_b_1.vst %.vbe
    @echo "      Formal checking  -> $@"
    flatbeh $*_b_1 $*_b_1_net > $_flatbeh.out
    proof -d $* $*_b_1_net > $_proof.out

#-----scapin-----#

ac_scapin_registers:
    cat sdetj_b_1.vst | grep sff

%_scan.vst: %.vst scan.path
    @echo "      scan-path insertion  -> $@"
    scapin -VRB $* scan $_scan > scapin.out

#----- ocp-----#

sdet_p_ap.ap : sdet.ioc sdetj_b_1_scan.vst
    MBK_IN_LO=vst; export MBK_IN_LO;\
    MBK_OUT_PH=ap; export MBK_OUT_PH;\

```

```
ocp -v -ring -ioc sdet sdetj_b_l_scan sdet_p > ocp.out

#----- nero-----#
nero.ap: sdet_p.ap sdetj_b_l_scan.vst
nero -V -p sdet_p sdetj_b_l_scan sdetj_b_l_scan > nero.out

#----- ivx & cougar ----- #

%.al : %.ap
    MBK_OUT_LO=al; export MBK_OUT_LO;\
    RDS_TECHNO_NAME=./techno/techno-035.rds;\
    export RDS_TECHNO_NAME;\
    cougar -v $* > cougar_$.out
    lvx vst al $* $* -f > lvx_$.out

#----- druc-----#
druc_core : sdetj_b_l_scan.ap
    RDS_TECHNO_NAME=./techno/techno-symb.rds;\
    export RDS_TECHNO_NAME;\
    druc sdetj_b_l_scan > druc_core.out

#----- s2r-----#
sdet_chip.cif : sdetj_b_l_scan.ap
    RDS_TECHNO_NAME=./techno/techno-035.rds;\
    export RDS_TECHNO_NAME;\
    RDS_OUT=cif; export RDS_OUT;\
    s2r -v -r sdetj_b_l_scan > s2r.out
```


IOS file

LEFT (# IOs from bottom to top

(IOPIN scanin.0);

(IOPIN day_time.0);

(IOPIN code(0).0);

)

TOP (# IOs from left to right

(IOPIN code(1).0);

(IOPIN code(2).0);

(IOPIN code(3).0);

)

RIGHT(# IOs from bottom to top

(IOPIN test.0);

(IOPIN reset.0);

)

BOTTOM (# IOs from left to right

(IOPIN door.0);

(IOPIN clk.0);

(IOPIN alarm.0);

(IOPIN scanout.0);)

OCP output

```

    @@@      @@@@@ @ @@@@@@@@@@
    @@  @@  @@  @@  @@  @@
    @@  @@  @@  @  @@  @@
    @@  @@@@  @  @@  @@
    @@  @@ @@      @@  @@
    @@  @@ @@      @@@@
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    @@  @@ @@      @@
    @@  @@ @@      @  @@
    @@  @@  @@  @@  @@
    @@@      @@@@@ @@@@@@@@@@

```

Placer for Standards Cells

Alliance CAD System 5.0 20090901, ocp 5.0

Copyright (c) 2001-2019, ASIM/LIP6/UPMC

E-mail : alliance-users@asim.lip6.fr

o ALLIANCE environment:

o ALLIANCE_TOP : /usr/lib64/alliance

o MBK environment:

o MBK_IN_LO : vst

o MBK_OUT_LO : vst

o MBK_IN_PH : ap

o MBK_OUT_PH : ap

o MBK_VSS : vss

- o MBK_VDD : vdd
- o MBK_CATAL_NAME : CATAL
- o MBK_CATA_LIB : .
 - /usr/lib64/alliance/cells/sxlib
 - /usr/lib64/alliance/cells/dp_sxlib
 - /usr/lib64/alliance/cells/rflib
 - /usr/lib64/alliance/cells/rf2lib
 - /usr/lib64/alliance/cells/ramlib
 - /usr/lib64/alliance/cells/romlib
 - /usr/lib64/alliance/cells/pxlib
 - /usr/lib64/alliance/cells/padlib

- o Number total of instances is 40
- o Number of instances to place is 40
- o Number of instances already placed is 0
- o Number of nets is 49
- o Sum of instances to place widths is ... 237
- o Computing Initial Placement ...
- o User Margin : 20%
- o Number of Rows : 5
- o Real Margin : 16.8421%
- o Width of the abutment box : 57
- o Height of the abutment box : 50
- o conspace : 19 1st connector : 9.5
- o adding connector : code 1 x : 9 y : 50
- o adding connector : code 2 x : 28 y : 50
- o adding connector : code 3 x : 47 y : 50
- o conspace : 14.25 1st connector : 7.125
- o adding connector : door x : 7 y : 0

- o adding connector : clk x : 21 y : 0
- o adding connector : alarm x : 35 y : 0
- o adding connector : scanout x : 49 y : 0
- o adding connector : scanin x : 0 y : 8
- o adding connector : day_time x : 0 y : 25
- o adding connector : code 0 x : 0 y : 42
- o adding connector: test x : 57 y : 12
- o adding connector: reset x : 57 y : 37
- o Initial Placement Computing ... done.
- o Beginning global placement
- o Initial RowCost = 7.6
- o Initial BinCost = 7.6
- o Initial NetCost = 2515.5
- o Initial Cost = 1
- o Computing Initial Temperature ...
- o bins size 237
- o bins capa 237
- o subrows capa 237

Loop = 1, Temperature = 0.170009, Cost = 0.983304

RowCost = 39.6, BinCost = 39.6, NetCost = 2473.5

Success Ratio = 98.3704%, Dist = 1, Delta = 0.5

- o Total impossible movements = 737

- o 0 % suroccupied target

- o 34.8711 % source equal target

- o 65.1289 % impossible exchange

Loop = 2, Temperature = 0.0850047, Cost = 0.913337

RowCost = 33.6, BinCost = 33.6, NetCost = 2297.5

Success Ratio = 97.1852%, Dist = 1, Delta = 0.5

- o Total impossible movements = 1309

- o 0 % suroccupied target

- o 35.5997 % source equal target

- o 64.4003 % impossible exchange

Loop = 3, Temperature = 0.0425024, Cost = 0.952693

RowCost = 41.6, BinCost = 41.6, NetCost = 2396.5

Success Ratio = 95.7037%, Dist = 1, Delta = 0.5

- o Total impossible movements = 1890

- o 0 % suroccupied target

- o 36.455 % source equal target

- o 63.545 % impossible exchange

Loop = 4, Temperature = 0.0212512, Cost = 0.937984

RowCost = 41.6, BinCost = 41.6, NetCost = 2359.5

Success Ratio = 85.7778%, Dist = 1, Delta = 0.5

- o Total impossible movements = 2433

- o 0 % suroccupied target

- o 38.3066 % source equal target

- o 61.6934 % impossible exchange

Loop = 5, Temperature = 0.0131729, Cost = 0.881932

RowCost = 39.6, BinCost = 39.6, NetCost = 2218.5

Success Ratio = 75.7037%, Dist = 1, Delta = 0.619866

- o Total impossible movements = 2824

- o 0 % suroccupied target

- o 39.5184 % source equal target

- o 60.4816 % impossible exchange

Loop = 6, Temperature = 0.00977391, Cost = 0.920493

RowCost = 39.6, BinCost = 39.6, NetCost = 2315.5

Success Ratio = 63.4074%, Dist = 1, Delta = 0.741971

- o Total impossible movements = 3348

- o 0 % suroccupied target

- o 40.6511 % source equal target

- o 59.3489 % impossible exchange

Loop = 7, Temperature = 0.00817084, Cost = 0.847346

RowCost = 45.6, BinCost = 45.6, NetCost = 2131.5

Success Ratio = 49.4815%, Dist = 1, Delta = 0.835985

- o Total impossible movements = 3761

- o 0 % suroccupied target

- o 41.4252 % source equal target

- o 58.5748 % impossible exchange

Loop = 8, Temperature = 0.0064054, Cost = 0.837011

RowCost = 31.6, BinCost = 31.6, NetCost = 2105.5

Success Ratio = 43.4074%, Dist = 0.994074, Delta = 0.783934

- o Total impossible movements = 4204

- o 0 % suroccupied target

- o 41.8649 % source equal target

- o 58.1351 % impossible exchange

Loop = 9, Temperature = 0.00510952, Cost = 0.791692

RowCost = 37.6, BinCost = 37.6, NetCost = 1991.5

Success Ratio = 37.6296%, Dist = 0.930748, Delta = 0.797689

- o Total impossible movements = 4647

- o 0 % suroccupied target

- o 41.941 % source equal target

- o 58.059 % impossible exchange

Loop = 10, Temperature = 0.00428651, Cost = 0.788909

RowCost = 47.6, BinCost = 47.6, NetCost = 1984.5

Success Ratio = 28.1481%, Dist = 0.783207, Delta = 0.838926

- o Total impossible movements = 5210

- o 0 % suroccupied target

- o 42.2265 % source equal target

- o 57.7735 % impossible exchange

Loop = 11, Temperature = 0.00345559, Cost = 0.774995

RowCost = 43.6, BinCost = 43.6, NetCost = 1949.5

Success Ratio = 20%, Dist = 0.595237, Delta = 0.806156

- o Total impossible movements = 5641

- o 0 % suroccupied target

- o 42.6343 % source equal target

- o 57.3657 % impossible exchange

Loop = 12, Temperature = 0.00282787, Cost = 0.771815

RowCost = 47.6, BinCost = 47.6, NetCost = 1941.5

Success Ratio = 20%, Dist = 0.45238, Delta = 0.818346

- o Total impossible movements = 6152

- o 0 % suroccupied target

- o 42.8804 % source equal target

- o 57.1196 % impossible exchange

Loop = 13, Temperature = 0.0023842, Cost = 0.733254

RowCost = 47.6, BinCost = 47.6, NetCost = 1844.5

Success Ratio = 12.4444%, Dist = 0.309629, Delta = 0.843106

- o Total impossible movements = 6913

- o 0 % suroccupied target

- o 43.0927 % source equal target

- o 56.9073 % impossible exchange

Loop = 14, Temperature = 0.00209423, Cost = 0.733254

RowCost = 47.6, BinCost = 47.6, NetCost = 1844.5

Success Ratio = 18.2222%, Dist = 0.229814, Delta = 0.878379

- o Total impossible movements = 8137

- o 0 % suroccupied target

- o 44.9429 % source equal target

- o 55.0571 % impossible exchange

Loop = 15, Temperature = 0.00175117, Cost = 0.753528

RowCost = 49.6, BinCost = 49.6, NetCost = 1895.5

Success Ratio = 12.5926%, Dist = 0.157635, Delta = 0.836188

- o Total impossible movements = 9310

- o 0 % suroccupied target

- o 46.3373 % source equal target

- o 53.6627 % impossible exchange

Loop = 16, Temperature = 0.00153732, Cost = 0.733254

RowCost = 49.6, BinCost = 49.6, NetCost = 1844.5

Success Ratio = 11.7037%, Dist = 0.106725, Delta = 0.877885

- o Total impossible movements = 10854

- o 0 % suroccupied target

- o 47.3742 % source equal target

- o 52.6258 % impossible exchange

- o No More Mouvement Possible

- o Global Placement finished

- o Gain for RowCost = -552.632%

- o Gain for BinCost = -552.632%

- o Gain for NetCost = 26.6746%

- o NetCost Estimated = 1844.5

- o Movements Stats ?!

- o 10840 Tried Moves

- o 0.101476 % of accepted simple instance move

- o 48.2011 % of accepted instance exchange

- o 0.0645756 % of rejected simple instance move

- o 51.6328 % of rejected instance exchange

- o Impossible Movements Stats

- o If you find these values interesting, call a doctor...

- o Total impossible movements = 10927

- o 0 % suroccupied target
- o 47.616 % source equal target
- o 52.384 % impossible exchange
- o Final Optimization in process ...
- o Net Cost before Final Optimization... 1955
- o Final Optimization succeeded ...
- o Final Net Cost 1420.5
- o Final Net Cost Optimization 27.3402%
- o Total Net Optimization 43.5301%

Ocp : placement finished

NO PREPLACEMENT GIVEN

- o Destruction of DATABASE

Nero output

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Negotiating Router

Alliance CAD System 5.0 20090901, nero 5.0

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E-mail : alliance-users@asim.lip6.fr

S/N 20080611.1

o MBK environment :

MBK_IN_LO := vst

MBK_OUT_LO := vst

MBK_IN_PH := ap

MBK_OUT_PH := ap

MBK_WORK_LIB := .

MBK_CATA_LIB := .

/usr/lib64/alliance/cells/sxlib

/usr/lib64/alliance/cells/dp_sxlib

/usr/lib64/alliance/cells/rflib

/usr/lib64/alliance/cells/rf2lib

/usr/lib64/alliance/cells/ramlib

/usr/lib64/alliance/cells/romlib

/usr/lib64/alliance/cells/pxlib

/usr/lib64/alliance/cells/padlib

MBK_CATAL_NAME := CATAL

MBK_VDD := vdd

MBK_VSS := vss

MBK_SEPAR := .

- o Loading netlist "sdetj_b_l_scan"...
- o Loading layout "sdet_p"...
- o Flattening layout...
- o Flattening netlist...
- o Building netlist dual representation (lofigchain)...
- o Binding logical & physical views...

- o Loading design into grid...
 - o Using seed cell "a2_x2_ins" (model "a2_x2").
 - o Grid offset : (0,0) [adjust (0,0)]
 - o Small design, global routing disabled.
 - o Allocating grid size [58,51,3].
 - o Loading external terminals.

- o Finding obstacles.
 - o Loading nets into grid.
 - o Allocating the net scheduler.
 - o Reading power grid.
-
- o Local routing stage.
 - [50] (hp := 0) "vdd"
 - [49] (hp := 0) "vss"
 - [48] (hp := 8) "na3_x1_7_sig"
 - [47] (hp := 10) "nao22_x1_sig"
 - [46] (hp := 11) "door"
 - [45] (hp := 11) "alarm"
 - [44] (hp := 11) "aux4"
 - [43] (hp := 12) "a4_x2_sig"
 - [42] (hp := 13) "scanout"
 - [41] (hp := 13) "na3_x1_5_sig"
 - [40] (hp := 13) "na2_x1_2_sig"
 - [39] (hp := 16) "o2_x2_sig"
 - [38] (hp := 16) "o3_x2_sig"
 - [37] (hp := 16) "na3_x1_2_sig"
 - [36] (hp := 16) "nao22_x1_sig"
 - [35] (hp := 17) "na2_x1_2_sig"
 - [34] (hp := 17) "na3_x1_4_sig"
 - [33] (hp := 17) "not_aux0"
 - [32] (hp := 18) "scanin"
 - [31] (hp := 18) "na2_x1_sig"
 - [30] (hp := 20) "inv_x2_sig"
 - [29] (hp := 21) "na3_x1_6_sig"
 - [28] (hp := 21) "na3_x1_3_sig"

- [27] (hp := 21) "not_aux3"
- [26] (hp := 23) "no2_x1_sig"
- [25] (hp := 23) "not_fsm_alarm_cs 2"
- [24] (hp := 24) "no2_x1_3_sig"
- [23] (hp := 24) "not_code 2"
- [22] (hp := 25) "day_time"
- [21] (hp := 32) "not_fsm_alarm_cs 0"
- [20] (hp := 34) "not_aux2"
- [19] (hp := 39) "not_fsm_alarm_cs 1"
- [18] (hp := 39) "not_code 1"
- [17] (hp := 43) "a2_x2_sig"
- [16] (hp := 44) "na3_x1_sig"
- [15] (hp := 45) "not_aux1"
- [14] (hp := 46) "clk"
- [13] (hp := 46) "not_aux4"
- [12] (hp := 50) "not_code 3"
- [11] (hp := 51) "code 1"
- [10] (hp := 52) "no4_x1_sig"
- [9] (hp := 54) "code 0"
- [8] (hp := 55) "reset"
- [7] (hp := 56) "no4_x1_2_sig"
- [6] (hp := 58) "fsm_alarm_cs 2"
- [5] (hp := 70) "test"
- [4] (hp := 72) "fsm_alarm_cs 1"
- [3] (hp := 73) "aux3"
- [2] (hp := 80) "fsm_alarm_cs 0"
- [1] (hp := 83) "code 3"
- [0] (hp := 84) "code 2"

> AStar unable to find a path.

> Re-routing with pri := 256.

- [1] (hp := 24) "not_code 2"

- [0] (hp := 51) "code 1"

o Routing stats :

- routing iterations := 34880

- re-routing iterations := 3082

- ratio := 8.11865%.

o Dumping routing grid.

o Saving MBK figure "sdetj_b_l_scan".

- Saving layout as "sdetj_b_l_scan"...

lvx output

```
@@@@@@ @@@@ @@@ @@@@ @@@@
@@  @@ @  @@  @
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@@@@@@@@@@ @  @@@ @@@@
```

Gate Netlist Comparator

Alliance CAD System 5.0 20090901, lvx 1.4

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E-mail : alliance-users@asim.lip6.fr

***** Loading and flattening sdetj_b_l_scan (vst)...

***** Loading and flattening sdetj_b_l_scan (al)...

***** Compare Terminals

***** O.K. (0 sec)

***** Compare Instances

***** O.K. (0 sec)

***** Compare Connections

***** O.K. (0 sec)

===== Terminals 14

===== Instances 40

===== Connectors 226

***** Netlists are Identical. ***** (0 sec)

Cougar output

```
@@@@ @
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@@ @@ @@ @@ @@ @@ @@ @@ @ @@@ @@
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@@@@ @@@ @@@@@ @@@ @@@ @@@ @@@@@ @@@ @@@ @@@
```

Netlist extractor ... formerly Lynx

Alliance CAD System 5.0 20090901, cougar 1.21

Copyright (c) 1998-2019, ASIM/LIP6/UPMC

Author(s): Ludovic Jacomme and Gregoire Avot

Contributor(s): Picault Stephane

E-mail : alliance-users@asim.lip6.fr

---> Parse technological file ./techno/techno-035.rds

RDS_LAMBDA = 24
RDS_UNIT = 80
RDS_PHYSICAL_GRID = 2
MBK_SCALE_X = 100

---> Extract symbolic figure sdetj_b_l_scan

---> Translate Mbk -> Rds

---> Build windows

<--- 80

---> Rectangles : 1258

---> Figure size : (-116, -116)
(28616, 25116)

---> Cut transistors

<--- 0

---> Build equis

<--- 55

---> Delete windows

---> Build signals

<--- 55

---> Build instances

<--- 65

---> Build transistors

<--- 0

---> Save netlist

<--- done !

---> Total extracted capacitance

<--- 0.0pF

Druc output

```
@@@@@@@@ @@@@@@@@@ @@@@@ @
@@ @@ @@ @@ @@ @@
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@@ @@ @@ @@ @@@@@ @@@@@ @ @
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@@ @@ @@@@@@@ @@ @@ @@
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@@ @@ @@ @@ @@ @@ @@ @
@@ @@ @@ @@ @@ @@@@@ @@ @@
@@@@@@@@ @@@@@@ @@@ @@@@@ @ @@@@@
```

Design Rule Checker

Alliance CAD System 5.0 20090901, druc 5.0

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E-mail : alliance-users@asim.lip6.fr

Flatten DRC on: sdetj_b_l_scan

Delete MBK figure : sdetj_b_l_scan

Load Flatten Rules : ./techno/techno-symb.rds

Unify : sdetj_b_l_scan

Create Ring : sdetj_b_l_scan_rng

Merge Errorfiles:

Merge Error Instances:

instructionCourante :

00001234567891011121314151617181920212223242526272829303132333435363738394041424344
454647484950515253545556

End DRC on: sdetj_b_l_scan

Saving the Error file figure

Done

5758

Some errors have been detected, see file: sdetj_b_l_scan.drc for detailed

S2r output

@@@@
@ @@
@@ @@
@@@@@@ @@@ @@ @@@ @@@
@@ @ @ @@ @@@ @@
@@@ @ @@ @@
@@@@ @ @@
@@@@ @ @@
@ @@@ @ @ @@
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Symbolic to Real layout converter

Alliance CAD System 5.0 20090901, s2r 5.0

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E-mail : alliance-users@asim.lip6.fr

o loading technology file : ./techno/techno-035.rds

o loading all level of symbolic layout : sdetj_b_l_scan

o removing symbolic data structure

o layout post-treating

with top connectors,

with sub connectors,

with signal names,

without scotch.

--> post-treating model buf_x2

rectangle merging :

. RDS_NWELL

. RDS_PWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

--> post-treating model o2_x2

rectangle merging :

. RDS_NWELL

. RDS_PWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

--> post-treating model no2_x1

rectangle merging :

. RDS_NWELL

. RDS_PWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

--> post-treating model on12_x1

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model sff2_x4

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model inv_x2

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model na3_x1

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model o3_x2

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model nao22_x1

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model a2_x2

rectangle merging :

. RDS_NWELL
. RDS_PWELL

. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model no4_x1

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model na2_x1

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP
. RDS_ACTIV
. RDS_POLY
. RDS_ALU1

--> post-treating model a4_x2

rectangle merging :

. RDS_NWELL
. RDS_PWELL
. RDS_NIMP
. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

--> post-treating model noa22_x1

rectangle merging :

. RDS_NWELL

. RDS_PWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

--> post-treating model tie_x0

rectangle merging :

. RDS_NWELL

. RDS_PWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_ALU1

--> post-treating model rowend_x0

rectangle merging :

. RDS_NWELL

. RDS_ALU1

--> post-treating model sdetj_b_l_scan

ring flattenning :

. RDS_NWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

rectangle merging :

. RDS_NWELL

. RDS_NIMP

. RDS_PIMP

. RDS_ACTIV

. RDS_POLY

. RDS_ALU1

. RDS_ALU2

. RDS_ALU3

o saving sdetj_b_l_scan.cif

o memory allocation informations

--> required rectangles = 1626 really allocated = 7

--> Number of allocated bytes: 295233