




# Static Case Run

dongmm  
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# Agenda



1. Case setting



2. static\_timing.rpt



3. Output

# Case Setting - commands

- `define_cell`
- `define_template`
- `define_arc`
- `define_leafcell`
- `set_false_path`
  - `set_false_path -through {A} -through {B C}`. Means (A & (B | C))
  - This command must be set in `–char_script` file
- `char_ams`
  - `char_ams -user_arcs_only -extsim "xps aps" -char_params {-thread 12} -char_script $rundir/static.tcl`
- `static.tcl`
  - Transfer to `*.static.timing.tcl`, really char script

# Case Setting - parameters

- **static\_char**
  - Enable static mode characterization. Default 0.
- **mx\_spv\_api**
  - Enable spv.tcl write out, make spicevision read easily. Default 0.
- **mx\_partition\_name\_use\_arc**
  - When generating part names, use arc info. Default 1.
  - Recommended 0 for static. Since static group partition cells based arc type: delay, setup or hold, not based each arc.
- **static\_char\_define\_arc\_probe\_mode**
  - Speed up the arc create by keep all probe and rel\_probe pairs to list, default to 0. Recommended 1 for static mode.
- **mega\_enable**
  - Use this variable to enable the use of an advanced algorithm referred to as "mega" mode. This mode improves inside\_view preprocessing of large cells.
  - Recommended is 2 for capacitance char, enable mega mode for all cells

# static\_timing.rpt

- Enable static\_timing report through tcl command
  - report\_static\_char
  - Usage information:
    - -index\_1 string () Index\_1 selection criteria [min|mid(default)|max|all]
    - -index\_2 string () Index\_2 selection criteria [min|mid(default)|max|all]
    - -path string () Path selection criteria for a given arc [worst(default)|all]
    - -type string () Supported types are delay/setup/hold
    - -format string () Supported column formats are load/cg/fanout
    - -report\_name string () The file name of the generated timing report
    - -pin list () Pins (output or constrained pins)
    - -related\_pin list () Related pins (input or related pins)
    - -cells list () List of cell names
  - This command must be used before char\_ams.

# static\_timing.rpt

- Report format

Type: setup\_rising rise\_constraint

Pins: pin: douthi\_0[11] related: e2ph1

Probes: pin: Xdp/Xbyte[1]/Xmux[2]/XI9/sregs\_mqb related: Xdp/Xbyte[1]/Xmux[2]/net62

Table Indices: pin: 0.06 related: 0.06

Point	Incr	Path	
douthi_0[11]	0	0	r
Xdp/Xbyte[1]/Xmux[2]/d	0.05403	0.05403	f
Xdp/Xbyte[1]/Xmux[2]/XI9/sregs_mqb	0.03256	0.08659	f
data arrival time:	0.08659		
e2ph1	0	0	r
Xcent/net80	0.01678	0.01678	f
stgph1_0	0.01086	0.02764	r
Xdp/Xbyte[1]/Xmux[2]/net62	0.0107	0.03834	f
clock arrival time:	0.03834		
setup time:	0.04825		

# Output

- Test:  
/icd/tsmc16\_vorm01/16NM/IT3171189/dongmm/static/Demo\_case
- Ldb file
  - Includes all probes timing tables
- ./ams
  - [ccx\\_corestage\\_2r1w.timing.tcl](#)
    - char\_library -skip {power leakage} -ams -extsim spectre -thread 0 –static
  - [ccx\\_corestage\\_2r1w.timing.ldb.gz](#)
    - All partition cells ldb, includes ccc data
  - [./ccx\\_corestage\\_2r1w\\_constraint\\_3097](#)
    - Partition cell info: arc.tcl cell.tcl sim.sp
  - [./spv](#)
    - Enable CCC level for netlist, make SpiceVision reading easier
- ./decks
  - All ccc simulation decks

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