**UG for polestar\_socenv testbench\***

simulation environment for reference

Version 0.1

Jinfeng.Huang, 2018/01/03

UVM based testbench trunk/dv/polestar\_socenv refers to Sirius SoC env testbench, it developed as reference for IP owners/verifiers to create their own scenarios and testcases. This document would give a brief introduction to the directory architecture and on how to use the environment:

BTW, you can also has a quick skill by read doc/README file.

1. **Directory description**./bin/cm\_hier.ccf : indicates the blocks that needs to do code coverage analyze

./env: including all uvm components

./assert : assertion related

./interface : interface related

./param\_def : define options and plusargs

./register\_model: register model related

./stim: all soc level sequences, used by sequencer

./uvc: all block uvm verification components

./flist: link to filelist directory

./lib: c model files included

./model: link to model directory

./script: all needed perl scripts

./sim: simulation directory

./dump: dump file produce directory

./out:testcase running and log produce directory

./CovData\_$today: coverage produce directory

./out-$today: regression produce directory

./tb: link to testbench directory

./testcase: all testcase included

./ceva\_test:

./ddr\_test:

./mipi\_dsitx\_test:

./qspi\_test:

1. **Running User guide**

Help:

>> vcs\_uvm.pl -h

Run a testcase:

Two methods:

First method(every testcase has own compile database)

>> vcs\_uvm.pl -sel -r

>> “select the index of testcase\_name you want to run”

Second method(every testcase use common compile database)

>> vcs\_uvm.pl -sel -c

>> vcs\_uvm.pl -sel -s

>> “select the index of testcase\_name you want to run”

DO REGRESSION

>> vcs\_uvm.pl -b batch.f -round=N

batch.f is customized regression testcase list, N is the round for the regression;

It will mkdir a directory related with date and round. Take date=2018-01-03, and round=2 as example, it will mkdir directory out-2018-01-03 under directory sim/ and dump file will automatically shut off, under out-2018-01-03, each testcase will have directories for running name such as {testcase\_name}\_r0 for round 0 and {testcase\_name}\_r1 for round 1;

COVERAGE

When you need to open the coverage, please add the option “-cov” in the command to open it, the result will produced in directory sim/CovData\_$today

BUILD a testcase:

You should build the customized testcase under directory ./testcase/\*\*\*\_test/\*, you can refer to the exist testcases; then add the testcase to package file ./env/polestar\_test\_lib\_pkg.svh (a automatic script will be added later).

Compile and run options:

You can modified the define options file is in env/param\_def/myplusargs (remember to add the define options line by line or separated by blank), the block off options file are env/param\_def/mydefine.v and env/param\_def/mydut.v which are inherited from Sirius’s env;

DUMP:

You can modified your dump hierarchy in tb/dump.sv file;

The fsdb file is in sim/dump/{testcase\_name}\_00\*.fsdb

LOG file

Running a testcase is actually in directory sim/out/{testcase\_name}

Log file is produced in sim/out/{testcase\_name}/vcs\_sim.log

PASS or FAIL

Pass or fail will print in blue or red info separately.