PI Flow Tutorial

2022/12/1

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Introduction

※ We will be taking RedHawk-SC Electrothermal PI Flow through 1 set of run and analysis scripts:

※ RHSC-ET 1st run scripts:

- run.tcl: this script does the following:
  - ✓ Imports data
  - ✓ Performs PDN CPM creation
  - ✓ Performs PKG/PCB extraction
  - ✓ Performs AC/Transient analysis simulation
- Bring up RHSC-ET GUI to view results

PI Flow Directory Structure

PI Flow Training directory

- README.txt — README for quick start
- install.txt — install for quick install RHSC-ET
- run.tcl — source this script to run the case
- design_data/
  - cpm
  - Board & package
  - profilepower_for_envelop
- clean

Step I: RedHawk-SC Electrothermal Install and Set License

- **Set RedHawk-SC Electrothermal path and license :**
  - setenv CPSROOT <choose the version installed on your server>
  - set path = ($CPSROOT/bin $path)
  - setenv ANSYSLMD_LICENSE_FILE <To your redhawk_cma/redhawk_sc_electrothermal license>
- **To execute RedHawk-SC Electrothermal :**
  - redhawk_sc_et -cma &

Step II: Running the script: run.tcl

※ First cd into the run directory

※ Make sure the design_data is in the same path

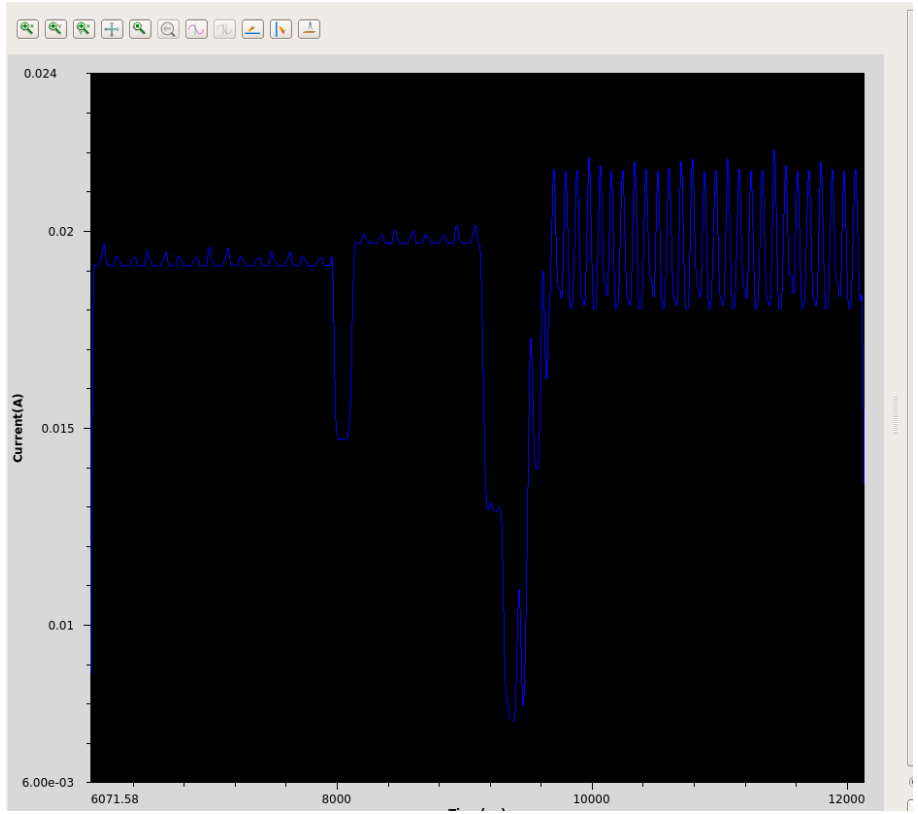
※ To run the script：
- % cd Training_testcase/PI
- % cma -ng run.tcl or // batch run, there is no GUI
- % cma run.tcl //GUI run
- % cma, and then source the run.tcl in TCL window

※ What does run.tcl do？
- ✓ Create the new project
- ✓ Import cpm file, package and pcb files
- ✓ Perform AC/Transient simulation
- ✓ After finishing simulation, view AC/Transient result

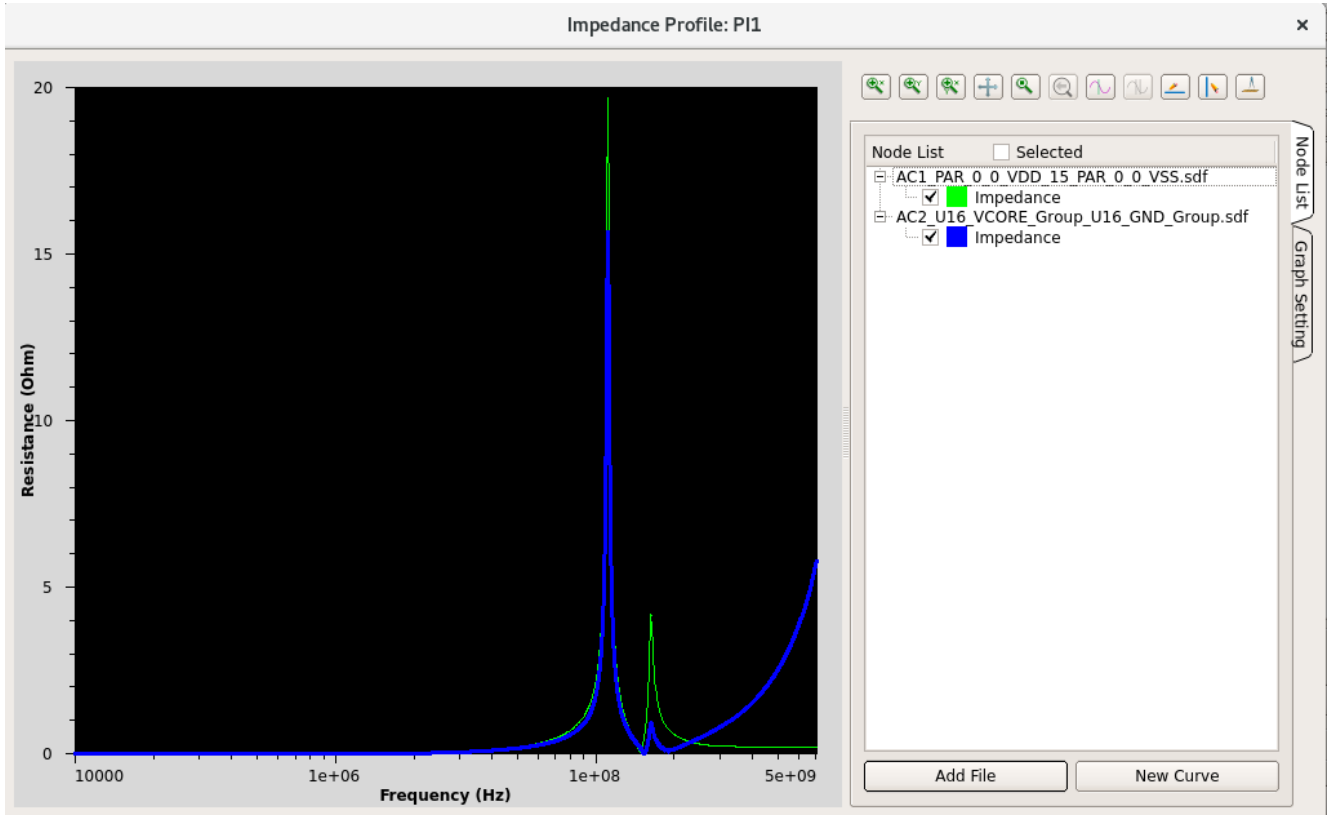
Step III: Result Exploration using GUI

※ **View the results in GUI**

Envelop CPM

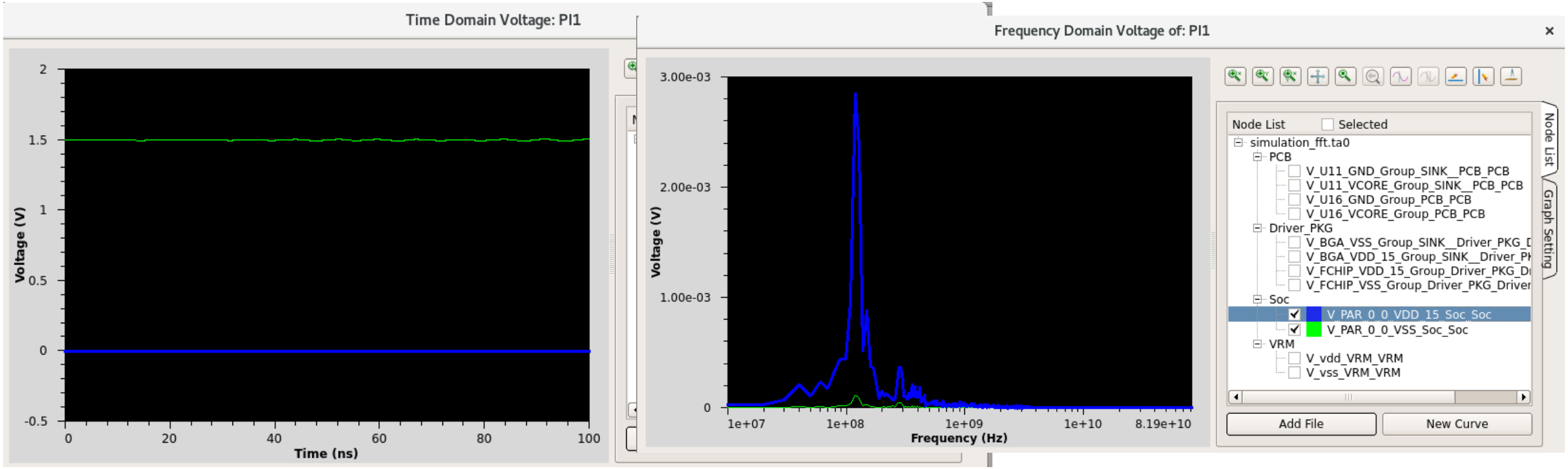


AC simulation result



Step III: Result Exploration using GUI

- **View transient results in GUI**

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