



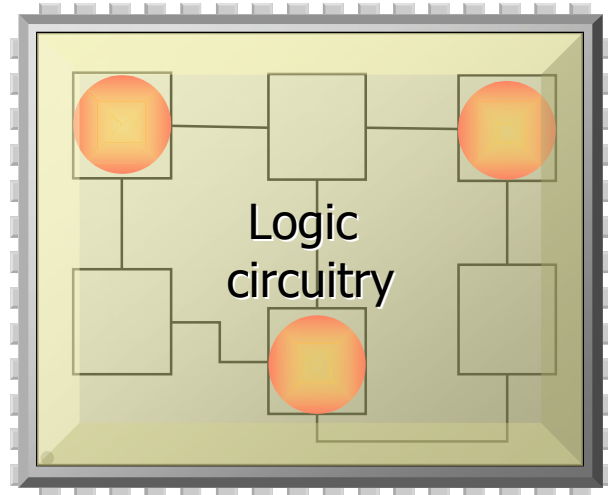
The development of portable devices with high performance and multiple features added to the arrival of nanometric technologies makes SoC power consumption a critical point designers have to deal with during the whole development.

The analysis of power consumption has to be performed at the earliest in the development flow so that designers may anticipate potential issues and adapt the architecture with no need for backtracking.

Keep **control of the power consumption** all along the development flow with **SCROOGE**

KEY FEATURES

- Hierarchical simulation of power consumption
- Display the leakage/dynamic power consumption during the transient simulation
- Identify critical points (peak)
- Quantify power consumption
- Adaptable power consumption report
- Graphic User Interface
- Interactive display
- Detect weaknesses as soon as designed-in at its development stage



 Where power consumption is too high

PRODUCT DESCRIPTION

SCROOGE is an add-on to all the **SMASH** ASIC options, empowering the only true mixed signal simulator with capabilities to simulate power consumption.

Thanks to the use of standard inputs such as the Liberty format (.lib) to define power models, VERILOG or VHDL models, a friendly graphic user interface and an adaptable power consumption report, **SCROOGE** enables to estimate the power consumption of any circuit before layout and to adapt its architecture accordingly.

- Hierarchical evaluation of power consumption of logic blocks, be it in a logic or in a mixed signal design, to trigger design improvements.
- Designers can quantify power consumption, track and detect any hot point and optimize it thanks to the link with the synthesizer for selecting standard cells.
- Designers can quantify power consumption of peripherals and optimize application programs thanks to its link with SUCCESS™.



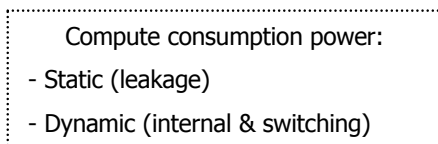
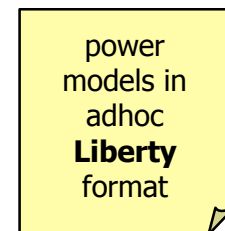
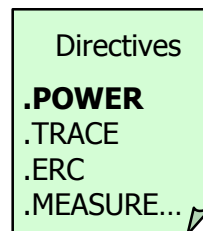
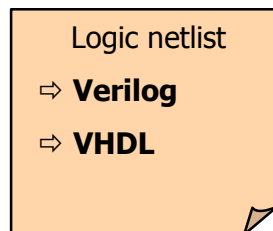
SMASH is available identically under Linux, Solaris and Windows.



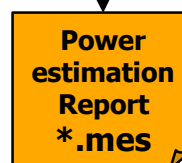
SCROOGE ease of use

An innovative Graphic User Interface facilitates quantifying and controlling the power consumption of logic blocks or cells associated with their Liberty power model (.lib).

- ✓ The **.POWER directive**, enables to plug simply the power models into the adhoc Synopsys **Liberty format (.lib)**.
- ✓ The block instances can be selected hierarchically from which to display the waveforms of the static (leakage) and/or dynamic (internal & switching) power consumption.
- ✓ The **.ERC directive** serves to detect potential critical power peaks.
- ✓ The **.MEASURE directive** helps create the power consumption reports.
- ✓ It then suffices to run a transient simulation.



Graphic User Interface



Generated with the .measure inputs:

- ⇒ Average consumption
- ⇒ Peaks detection...

SCROOGE reporting

- ☞ The .MEASURE directive helps the designer specify what he needs to display in the power report: average power consumption, peaks detection...
- ☞ The.ERC directive provides the designer with the critical power peaks which it highlights to trigger resizing of voltage supplies, etc.



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