



EDA Presentation Sheet

SCROOGE

Power optimization made easy

DOLPHIN INTEGRATION

SCROOGE is the power consumption analyzer for simulating mixed-signal power consumption hierarchically. Whereas common solutions enable statistical or average power consumption analysis, the main advantage of SCROOGE is to provide hierarchical evaluation of power consumption: both logic (leakage and dynamic) and analog, during transient simulation.

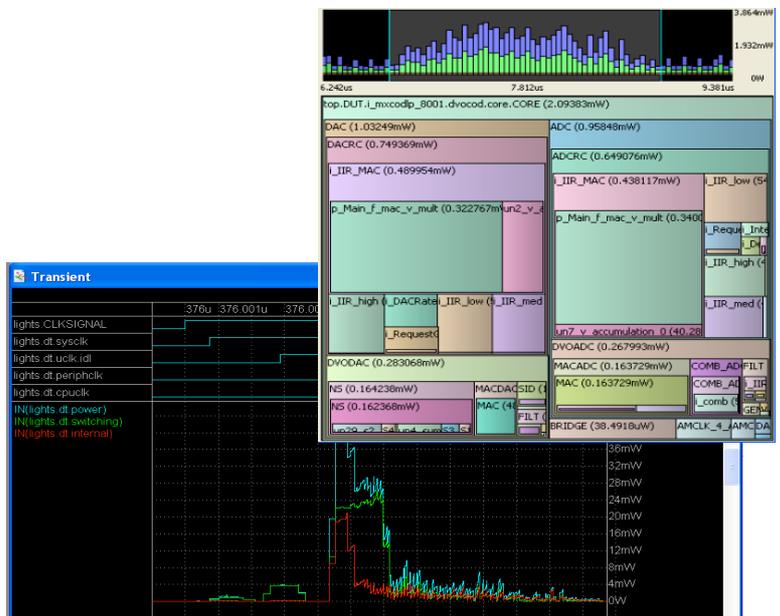
It is the solution of choice for companies pondering how to take a step toward efficient power estimations. Its unique capability to provide results for a complete mixed-signal design enables precise power optimizations and sizing of the components (DC-DC, power switch...).

SCROOGE - *powered by SMASH™* - is the Ideal Solution even for users with layout, P&R or power analyzer tools, as it can predict performance accurately on the basis of synthesis only.

Thanks to its user friendly features, power consumption analysis finally becomes easy!

KEY BENEFITS

- ✓ Integrate SCROOGE easily in your flow thanks to the use of standard formats
- ✓ Reduce power consumption all along the design chain! thanks to accurate transient analysis of the peaks on your SoC
- ✓ Optimize the sequencing of your SoC, thanks to the identification of the most consuming parts without any need for P&R data
- ✓ Avoid design iterations with your P&R provider thanks to clock tree emulation available after synthesis



DESCRIPTION OF THE SOLUTION

SCROOGE grants logic, analog and mixed-signal designers with the capability to quantify power consumption, to track and to detect all power peaks or hot points. But the logic part of a design is only one face of the coin as analog designers share the need to address other issues in time domain, beginning with the resilience of switching margins. SCROOGE is the first EDA solution to provide the capability to analyze hierarchically **mixed-signal** sensitivity to **power consumption**: a key feature for yield optimization of logic. Just what you need to make the right choices for sizing and assessing accurately your power optimizations is at hand!

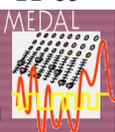
SCROOGE of course provides an interactive validation and optimization of your power budget. Benefit from a better accuracy of power consumption analysis thanks to emulation before Place & Route of the Clock Tree and High Fanout Nets.

Lastly, the great mixed signal simulator SMASH™ is completely integrated into SCROOGE. The ease of use it offers is striking! Gain in efficiency thanks to graphic, hierarchical and interactive visualization of results, but also thanks to the capability to customize html reports for best relevance in your design reviews.



SCROOGE is available identically under Linux, Solaris and Windows.

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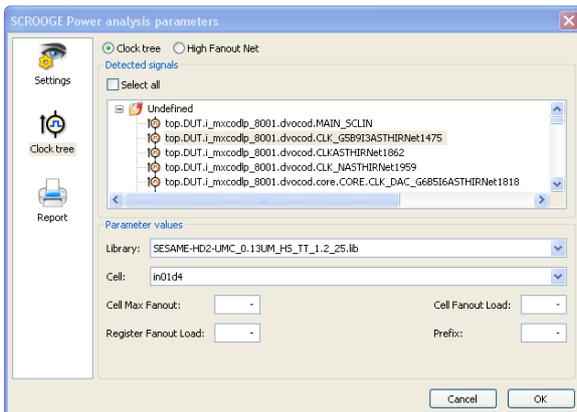
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Measuring & Reporting

Easy setup

- ✓ Standard format input files
- ✓ Clock tree and HFN emulation before P&R
- ✓ SPEF parasitic back-annotation



Interactive analysis

- ✓ Display of analog, leakage and dynamic power consumption during transient simulation
- ✓ Identification of critical points (peaks) and hot points
- ✓ Signal driven power simulation with testbench enable/disable to isolate power modes



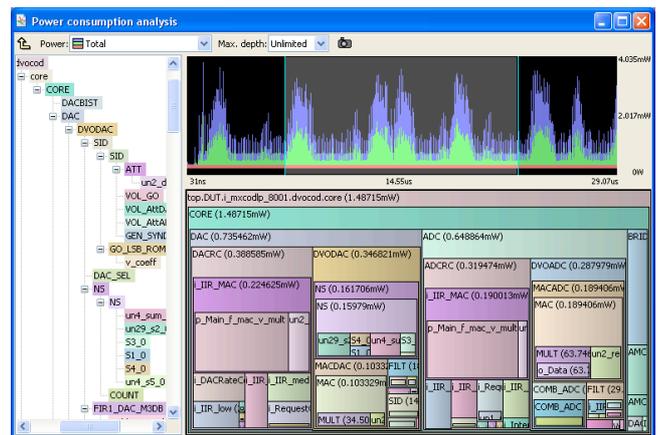
Fascinated by the idea of discovering an innovative EDA solution to predict and minimize the power consumption of your Mixed-Signal SoC?

Do not wait any longer and download our free Discovery option at:

www.dolphin.fr/medal/scrooge/scrooge_download.php

Analysis report

- ✓ Detailed logic and analog power consumption reporting with color scales
- ✓ Clock based cycle power consumption analysis
- ✓ Hierarchical browsing of power map, both online and as post-processing



Post processing

- ✓ Extraction of cycle power signature: min, max, average and std deviation
- ✓ Extraction of power consumption values (DCDC current, charge deficit, output capacitance) allowing to select and size DC-DC switching regulators
- ✓ Extraction of netlist area

Why does SCROOGE help you to be perfectly power consumption stingy?

- Avoid design oversizing to improve density and speed
- Detect circuit defaults and predict power consumption earlier in the flow (before P&R)
- Save designers' time by providing them with an easily and efficiently usable solution



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