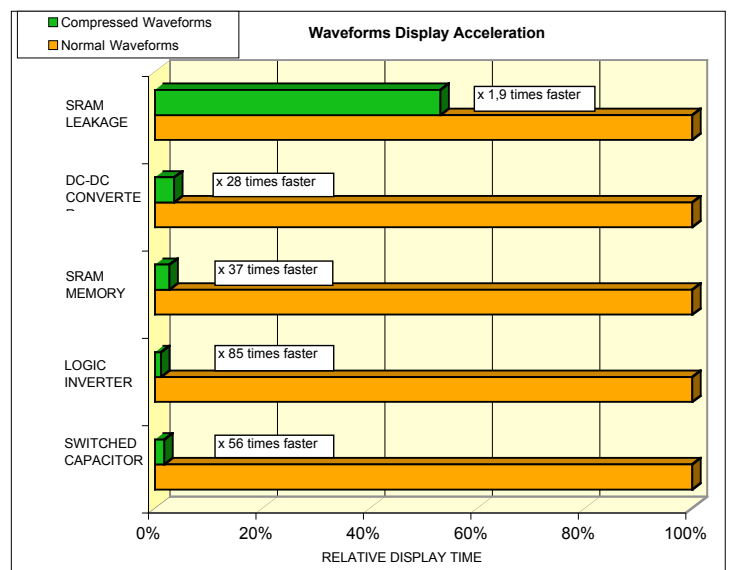


To overcome SoC integration challenges for increased performance, higher density, and reduced power consumption, designers must employ hierarchical budget allocation and analysis techniques. Constraints must be assigned harmoniously to the components of the System for power, noise...

In order to maintain its lead in diagnostic know-how, not only does SMASH provide hierarchical extraction and tracing of power and noise, but it facilitates Virtual Test by enabling floating net detection during simulation to spot high impedance nets otherwise noticed too late during real test.

KEY ENHANCEMENTS

- ✓ High impedance (floating) net detection at operating point and during transient analysis
- ✓ Hierarchical analog power extraction and tracing
- ✓ Acceleration of the interactive waveform display
- ✓ Tracing of resistive and capacitive impedance of SPICE nets for all analyses
- ✓ Integration of SPICE device models (lossy transmission lines, EKV3, PSP, Juncap2 diode...)
- ✓ HSPICE compatibility improvements for full compliance with foundry model parameter files including scaling (SCALE parameter)
- ✓ Enhanced API allowing users to create dedicated extensions and plug-ins for innovative processing



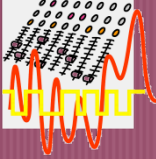
DESCRIPTION OF THE ENHANCEMENTS

Along with identified HSPICE compatibility improvements required by our users for not having to fiddle with the foundry supplied fab model parameter sets, SMASH 5.10 delivers lossy transmission line models, the EKV3 transistor model for analog/RF IC design, and the recently standardized PSP transistor model along with its source/drain junction model for accurate description of all physical effects important for modern and future CMOS technologies.

Improving designers' productivity to a large extent entails accelerating displays (as for the waveforms presented above) but also enhancing the diagnostic capabilities both at operating point and during transient analysis with innovative circuit debugging techniques like high impedance (floating) net detection. This is an exclusive SMASHing contribution!



SMASH is available identically under Linux, Solaris and Windows.



Which designer hasn't ever dreamed of an easier way to setup and hierarchically analyze his power consumption? Thanks to the new release of SCROOGE, it is now easier than ever to do so through key enhancements such as new setup dialogs, hierarchical instance power map, HTML report customization...

KEY ENHANCEMENTS

✓ Emulate High Fanout Nets and clock-trees before P&R

The tree emulation now handles all HFNs including clock-trees, thereby providing a higher accuracy of the estimation of internal consumption (related to the .LIB characterization) and taking into account the corresponding propagation delays.

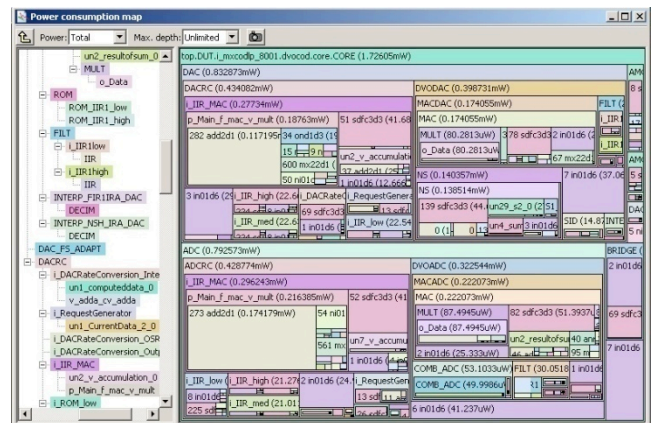
✓ New GUI to enhance your power analysis set up

Graphic dialog boxes facilitate the configuration of your power analysis and helps you to set up your analysis through simplified selection of wire loads models, available clock tree cells...

✓ Customize HTML reporting to highlight the most relevant data

Settings allow to customize the organization and the detail of your consumption reports to identify the most consuming parts of your SoC.

Extracting the most relevant data helps you to take the most efficient decisions according to your consumption constraints.



✓ View instance power map

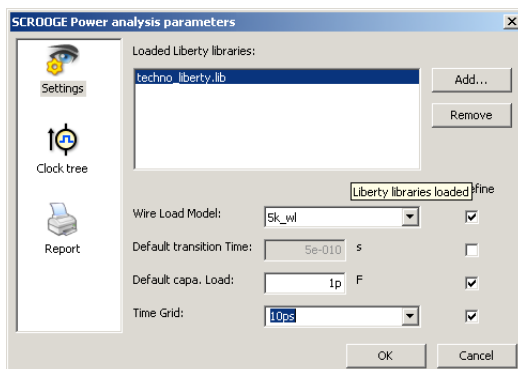
To easily investigate and identify the most consuming components in the hierarchy of your SoC, interactive and graphic power maps provide the designer with the means to browse through the power consumption results.

✓ View the hierarchical consumption of your analog part

No longer limited to logic blocks, SCROOGE now allows you to display, report and analyze the power consumption of analog blocks in a mixed-signal hierarchy. Therefore, the complete SoC power can be analyzed.

✓ Improved circuit loading time

Thanks to the enhanced compilation & circuit elaboration, your synthesized netlists are loaded an order of magnitude faster than with previous releases!



SMASH is available identically under Linux, Solaris and Windows.