

DOLPHIN INTEGRATION

**SMASH 7.3.0 - SCROOGE 4.3.0 -
SHAKER 7.3.0**

New Features

December 17, 2018

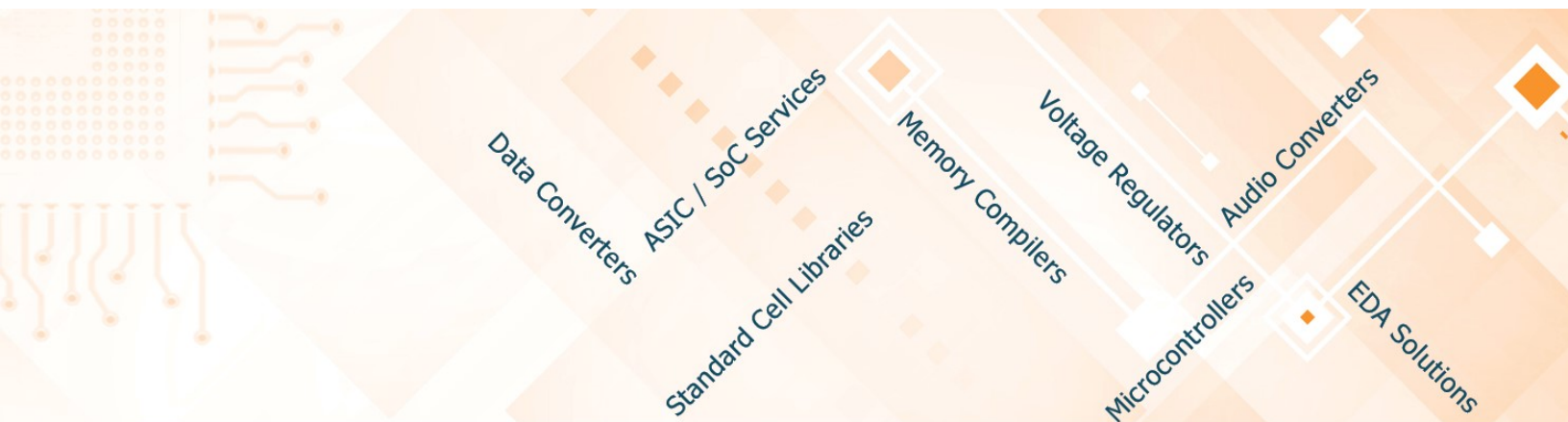
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Not just a supplier of Technology, but provider of the Dolphin Integration **know-how!**

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Preamble

As always for new releases, we would like to thank those customers who take the time to report problems and/or to suggest improvements (please remember that the best way to do so is by sending an email to support@dolphin-integration.com with an accurate description of your problem or suggestion, together with the relevant files if any). As you will see in the new features, we do our best to take remarks into account. And even if your suggestion does not appear this time, don't think it was lost or disregarded. Simply, it means that its implementation could not fit into the development plan for this particular release, but be assured that we will try to take it into account in a future release.

Web Site

Our web site <http://www.dolphin-integration.com> is a source of information on our EDA solutions. Aside from evaluation kits for our products, a number of application notes, courses or upgrades are available for download.

Supported Platforms

Microsoft Windows

SMASH is designed to run on Microsoft Windows Vista / 7 / 8 / 10 on x86_64 platforms.

Linux on Intel x64 platform

SMASH is designed to run under X-Window on RedHat Enterprise Linux 6 (RHEL6) and supports compatible Linux distributions on x86_64 platforms.

Credits & Copyrights

wxWidgets: A free C++ framework for cross-platform programming

<http://www.wxwidgets.org>

wxWindows Library License, Version 3

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3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)" The word 'cryptographic' can be left out if the routines from the library being used are not cryptographic related :-).
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Trio: portable and extendable printf and string functions

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Gear-Brayton Integration Method

The new formulation of the Gear-Brayton integration method included in SMASH was perfected and implemented at Supélec - Service des Mesures.

EKV3 Compact MOSFET Model Documentation

A. Bazigos, M. Bucher, F. Krummenacher, J.-M. Sallese, A.-S. Roy, C. Enz, "*EKV3 Compact MOSFET Model Documentation, Model Version 301.01*", Technical Report, Technical University of Crete, November 23, 2007.

VDA / FAT Open Source Library

The open source library of VHDL-AMS components created by the VDA / FAT working group is delivered with SMASH.

The VDA / FAT Working Group AK 30 "Simulation of Mixed Systems with VHDL-AMS" is organized within the Association for Research in Automobile Technology (FAT - Forschungsvereinigung Automobiltechnik) of the German Association of the Automotive Industry (VDA - Verband der Automobilindustrie). It promotes the relationship between car manufactures and their suppliers concerning simulation of mixed systems and model exchange.

The working group promotes the development of VHDL-AMS models that are integrated in different libraries.

FUNDAMENTALS_VDA

Public library with general VHDL-AMS models like time sources, converters between different domains, table-lookup models, relays, switches...

SPICE2VHD

VHDL-AMS models with nearly the same terminal behavior like Spice models of basic electrical elements like resistor, capacitor, inductor, and level1 models of semiconductor devices.

AUTOMOTIVE_VDA

Library under development with special parameterized models like wires, fuses, bulbs, EMC test signals...

New Features

SMASH - Documentation

Bug fixing

- Corrected missing User Manual documentation for Tools / Custom menu (DDIsa12490 - SMASH 7.3.0)

SMASH - Kernel

Enhancements

- Added support for lower-case Verilog identifiers when resolving mixed-language connections (DDIsa01766 - SMASH 7.3.0)
- Implemented a variable that represents the noise value without output noise gain for the SPICE noise source (DDIsa13283 - SMASH 7.3.0)
- Implemented a new way to initialize operating point search using CMOS logic (DDIsa13349 - SMASH 7.3.0)

Bug fixing

- Corrected Verilog/VHDL-AMS mixity by allowing to transmit lower-case Verilog signal through VHDL-AMS model (DDIsa01664 - SMASH 7.3.0)
- Corrected the transmission of lower-case Verilog signal through Spice model and the build of interface device (DDIsa05303 - SMASH 7.3.0)
- Corrected the visibility of error messages raised during the elaboration steps in multi-runs analyses (DDIsa13077 - SMASH 7.3.0)
- Corrected a crash that occurs when backannotation is activated with RunHz and without analog element (DDIsa13347 - SMASH 7.3.0)

SMASH - Models

Enhancements

- Implemented latest release (102.9.1) of the BSIM-IMG SPICE model (DDIsa13180 - SMASH 7.3.0)
- Modified the SPICE Noise source to report an elaboration error when the FILE or SIGNAL parameters are invalid (DDIsa13315 - SMASH 7.3.0)

SMASH - SPICE

Enhancements

- Added support for unquoted expressions as Spice parameter values (DDIsa12125 - SMASH 7.3.0)

- Implemented support for extracting S parameter from a linear circuit during a small signal analysis (DDIsa13155 - SMASH 7.3.0)
- Implemented new multiop algorithm to find all stable OP points of CMOSLogic circuits that have a reasonable number of OPs (DDIsa13190, DDIsa13312 - SMASH 7.3.0)
- Improved the loading speed of netlists with TMI models (DDIsa13332 - SMASH 7.3.0)

Bug fixing

- Corrected the evaluation of .PARAM user function that could block SMASH (DDIsa12876 - SMASH 7.3.0)
- Corrected a crash that occurs in multi-thread with SOA warnings (DDIsa13288 - SMASH 7.3.0)
- Corrected the evaluation of .PARAM inside .IF statements (DDIsa13351 - SMASH 7.3.0)
- Corrected the behavior of the .SAVEOP directive during DC analysis on parameter (DDIsa13354 - SMASH 7.3.0)
- Corrected abscissa points computation for the last point of DC linear analysis in order to get accurate measurements (.MEASURE) (DDIsa13363 - SMASH 7.3.0)

SMASH - Verilog-AMS

Enhancements

- Implemented the support of Verilog-Ams branch declaration in generate blocks (DDIsa13098 - SMASH 7.3.0)
- Implemented ONOISE and INOISE variables for Verilog-Ams instances (DDIsa13282 - SMASH 7.3.0)

Bug fixing

- Corrected Verilog-AMS nets case sensitivity (DDIsa06853 - SMASH 7.3.0)

SMASH - Viewer

Bug fixing

- Corrected refresh issues on the signals list when resizing it within the circuit panel (linux version) (DDIsa10470 - SMASH 7.3.0)
- Corrected the handling of DEL key in the bookmarks panel when no item is selected (DDIsa12993 - SMASH 7.3.0)
- Corrected the opening of PDF files from the bookmarks when their name contain spaces (DDIsa13192 - SMASH 7.3.0)
- Corrected situations where results of a 'find' action where not correct (DDIsa13364 - SMASH 7.3.0)
- Corrected a random crash when double-clicking the 'see more' item of the circuit device tree to retrieve all the devices (DDIsa13373 - SMASH 7.3.0)