

DOLPHIN

DESIGN

New Features

**SMASH 7.6.0 - SCROOGE 4.6.0 -
SHAKER 7.6.0**

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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.fr 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 www.dolphin-design.fr 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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This product includes cryptographic software written by Eric Young. This product includes software written by Tim Hudson.

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This package is an SSL implementation written by Eric Young. The implementation was written so as to conform with Netscapes SSL.

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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...

Verilator

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New Features

SMASH - Kernel

Enhancements

- Implemented a wrapper to simulate synthesizable Verilog or SystemVerilog thanks to Verilator (DDIsa14005 - SMASH 7.6.0)
- Implemented support of the new version 202006 of NICS LU solver (DDIsa14021 - SMASH 7.6.0)

SMASH - Models

Bug fixing

- Corrected the VCCAP model accuracy with GEAR integration method (DDIsa13957 - SMASH 7.6.0)

SMASH - SPICE

Enhancements

- Implemented RC reduction to speed-up simulations of post-extraction circuits (DDIsa14010 - SMASH 7.6.0)

Bug fixing

- Corrected circuit initialization by IC for transient analysis with power-up enabled (DDIsa14019 - SMASH 7.6.0)

SMASH - Verilog

Bug fixing

- Corrected the \$readmemh system task to allow reading 'X' or 'Z' values (DDIsa14016 - SMASH 7.6.0)