HIGH accuracy acceleration

AVOCAD

Innovative Software Technologies for Analog-Mixed-Mode IC Designs

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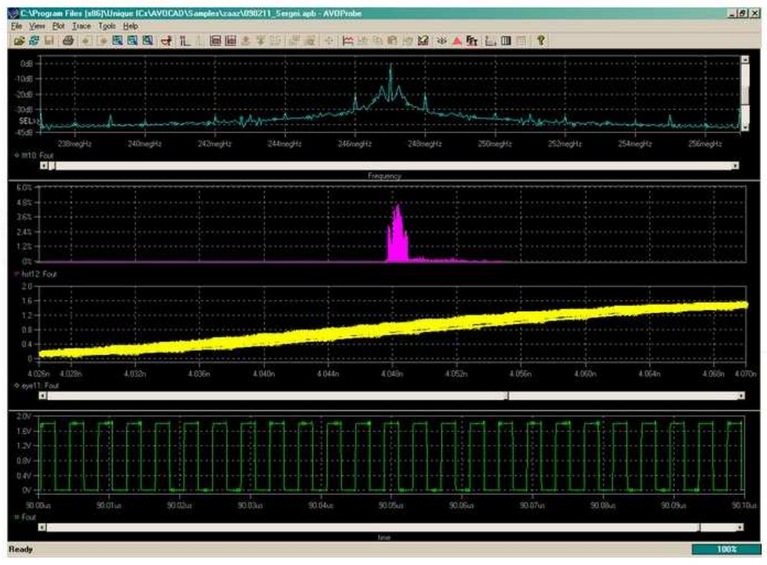
What is the AVOCAD?

Underlie of AVOCAD system is the idea of complete circuit verification is realized by industry's leaders on the basis of specially developed programs, which allow calculating of digital and digital-to-analog CMOS circuits with dimensions raising up to one million transistors within economically acceptable terms.

Goals and Focusing

AVOCAD system is focusing on SoC designers. This is NOT an environment for PDK development BUT this is the complete flow for designing of ICs beginning from a schematic capture and concluding with LPE simulation The innovation of AVOCAD system is the basis of our EDA applications. This is a new technology for SPICE simulation, providing fast and very accurate simulation of analog and analog-to-digital ICs at the transistor level

AVOProbe



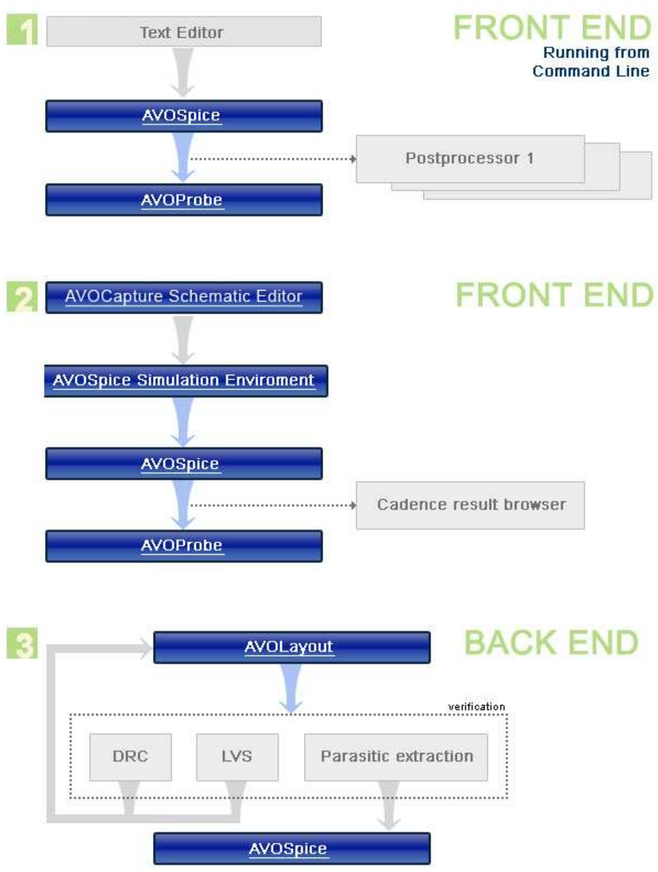
Plot of simulation results. Provided by progress bar and simulation could be suspended and resumed. Calculator with all possible ariphmetic functions is supported.

AVOSpice supports

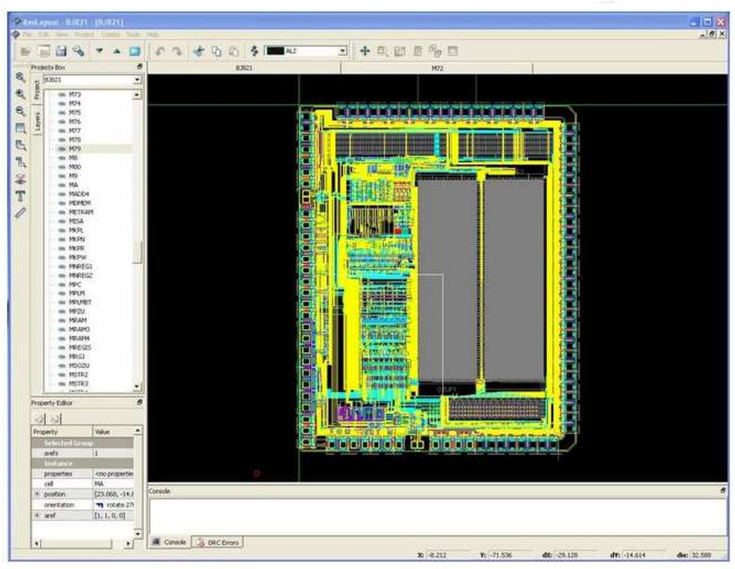
Supported analyses:
- TRANsient analysis;
- DC, OPerating points analyses;
- AC analysis;
- Parameterized analysis (SWEEP);
- Parameterized optimization (OPTIMIZE).

Supported models:
- MOS transistors (BSIM3v3.2, BSIM4.40, BSIM4.50, BSIMSOI3.2, EKV2.6, EKV3-TUC, JFET);
- BiPolar transistors (BJT Gummel-Poon, VBIC1.2, HICUM2.1);
- Diodes (level1 and 3);
- Resistor, capacitance and inductance;
- Sources (DC, EXP, PULSE, SIN, PWL,SFFM, VCVS, VCCS, CCVS, CCCS);
- Custom Verilog-A modules.

AVOCAD Flow

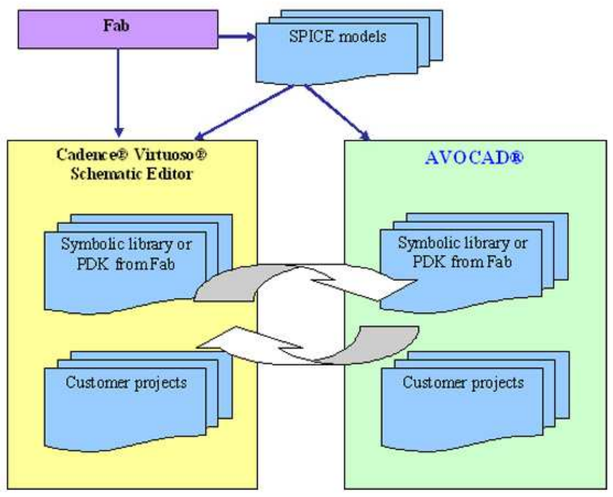


AVOLayout



Full-functional layout editor. Set of valid layers defined by technology file and colors defined by packets in DRF file. Each layer has properties like name, number, coordinates.

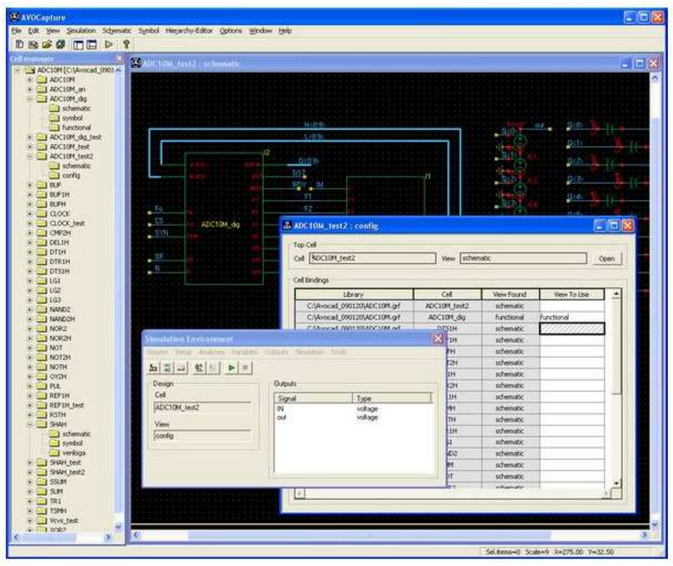
IP-sharing between AVOCAD and Cadence® Virtuoso®



* in current version CDB supported only OA platform support is under development.
IP-sharing of layouts supported only via stream-out to GDS and stream-in to AVOLayout database.

AVOCapture

is a full-function schematic capture working under OS Windows and under OS Linux through Wine virtual machine. It represents the interactive design environment managing IC designing process.



Key Features and Functional Capabilities refer to the webpage.

About AVOSpice

AVOSpice – is a simulation program for analog-digital circuits represented at the transistor level and optimized for very large-scale integrated circuits simulation.

AVOSpice – is a cheap solution allows to reduce time simulation owing to well-implemented multithreading.

AVOSpice – supports pre- and post-layout simulation of mixed-signal ICs on transistor level represented as Verilog-A and Verilog-HDL modules.

Accomplishments developed using AVOCAD

- DACs and ADCs (different capacity and architecture);
- Complex digital-to-analog interfaces;
- High frequency controlled current and voltage generators;
- Different SoC, for example optical mouse consists of photosensitive element schemes of analog and digital processing of signals;
- AVOCAD is a part of GarySmith EDA rating in 2007.

* Projects were implemented on 0.25um and 65nm CMOS technologies.

For more information please refer to
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and contact us by e-mail
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