

Casnoc, A Simulation Experience

Features of CASPOC, A Simulation Experience!

- Replay of the simulation results for failure modes and further investigation. Any point in time can be traced back and the state of the simulation on that point in time can be observed, included the animation, signals and state animation inside hierarchical models
- Animation of the full current path
- Animated symbols on custom library blocks
- Drawing of mechanical system, rotating and translating. Shafts, gearboxes, springs, bearings
- Improved library of electrical machine models
- Easier setting of parameters for all components
- Extended library blocks for power electronics and drive systems
- Interface with Data Acquisition board
- Interface with FEM programs like Ansys, IES-BEMFEM
- Export of the C code from the control in the block diagram
- Optimized C code export, independent use on any type of microcontroller or DSP
- C code export for the fixed point TI QMATH Library
- Export of Spice netlist from a part of the schematic to perform a detailed spice simulation based on initial conditions calculated in Casnoc.
- Add notes and background bitmaps to your schematic.
- Math blocks for any function evaluation
- Multiplexing signals
- Create scripts to run Casnoc in Batch mode
- Parameter sweep for any component parameter
- Bode diagram for any system to identify stability, impedance and audiosusceptibility. Obtain the Gain/Phase margin, bandwidth for any type of power electronics, no averaging models are required.
- Animation of the contents of the hierarchical library blocks during simulation
- Project management data can be stored with the simulation project
- Archive function to archive the entire project with one click

Online Help:

- www.casnoc.com

Extensive documentation:

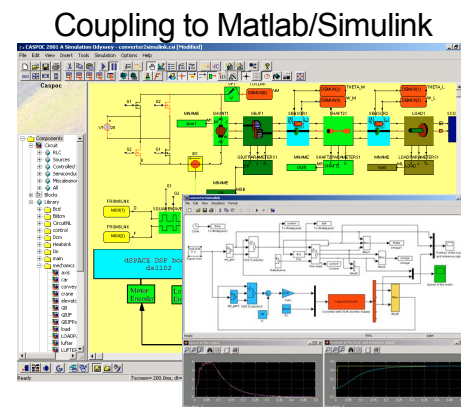
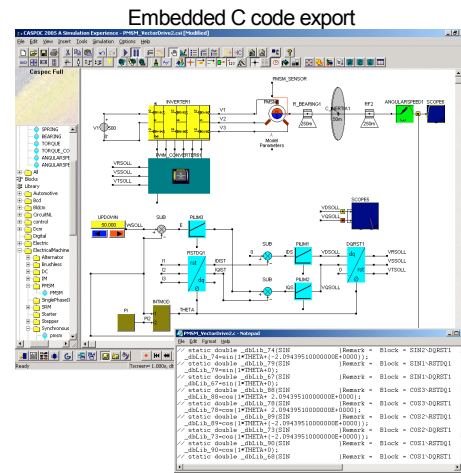
- User guides
- Tutorials
- Textbooks

Example Packages:

- Many samples on Power Electronics and Electrical Drives are already preprogrammed

Try Casnoc at no charge:

www.Simulation-Research.com



The Casnoc Standard version is not limited in nodes and blocks. The Standard version includes, samples, tutorial, libraries and over 850 pages of online help on CD-ROM. The Casnoc Professional version has extended features. Casnoc runs on Windows 9x/ME/NT4/2000/XP/VISTA

More info:

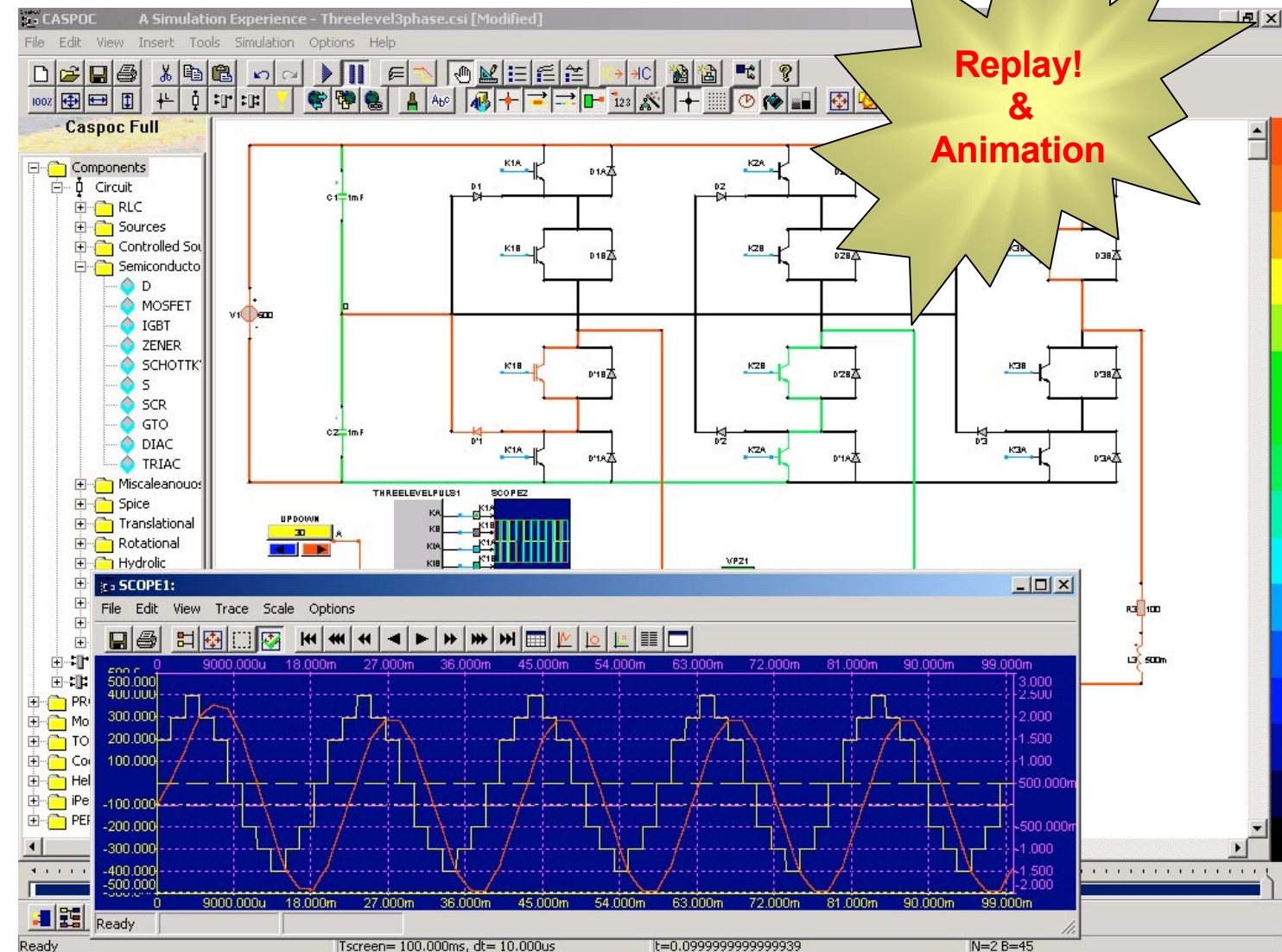
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Simulation Research reserves the right to vary in detail from the description and specification in this publication.

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CASPOC

A Simulation Experience



Fast simulation and animation without convergence problems
Power Electronics, Electrical Machine and Control in one schematic
Power Electronic simulation examples and tutorial

Animation of the circuit, drive and control!

WWW.CASPOC.COM

CASPOC: You can't beat our speed!

Caspoc Simulation Research

With the low-priced Caspoc Standard version you can simulate and animate DC converters, DC-AC converters, AC-DC converters, Controlled Rectifiers, DC converters with control, Induction Machines with inverters, Brushless DC machines, etc. Also, most of the examples from the *Educational Example Package* for power electronics can be simulated with the Caspoc Standard version.

Caspoc offers you:

- ✓ Fast simulation, no convergence problems!
- ✓ View results during simulation!
- ✓ Easy to learn!
- ✓ Free tutorial and lots of samples!
- ✓ Power Electronics, Drives, Control, all in one schematic!

Caspoc Standard, A Simulation Experience offers you:

- ✓ Replay of animation and simulation results!
- ✓ New Rotational and translational components!
- ✓ Improved electrical machine library!
- ✓ Small-signal analysis for every type of Switched mode power supply, even resonant converters!
- ✓ Coupling to Simulink!
- ✓ Non-linear components!
- ✓ C-script to create user defined blocks!
- ✓ Improved user interface and project manager!

Our High-End Professional version offers couplings to various simulation and analysis tools, supports embedded C code export and allows you to run scripts to optimize your designs.

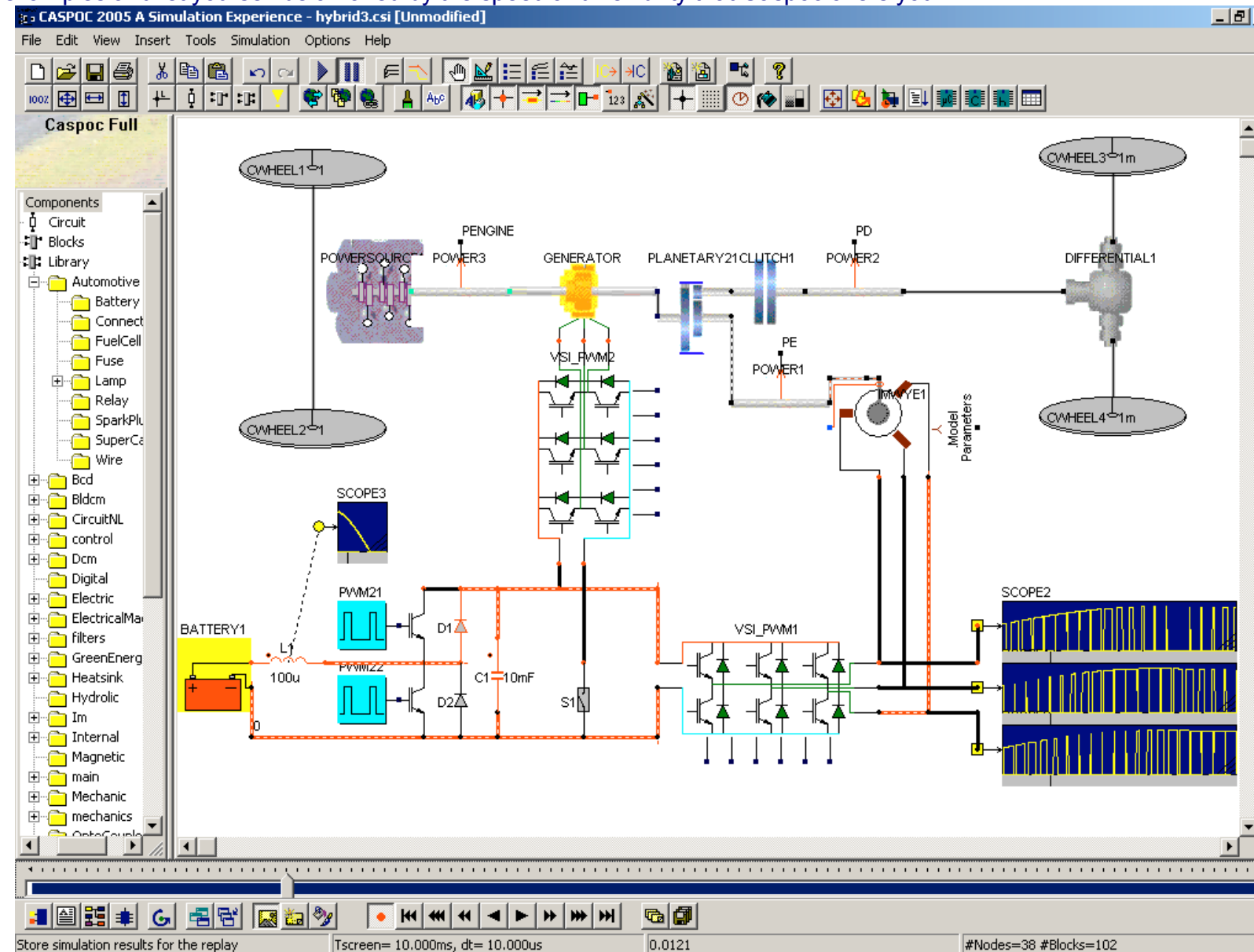
Caspoc Professional offers you:

- ✓ Optimize your simulations using the C-script language. Set parameters in your simulation and perform multiple simulations from the C-script!
- ✓ Export to Spice!
- ✓ Optimized export of embedded C code for micro-controller design!
- ✓ Typecast block for creating Fixed-Point simulations!
- ✓ Coupling to Electromagnetic software, such as ANSYS and many more!
- ✓ Coupling to multi-physics simulation tools!

Caspoc, You can't beat our speed!

Fast Prototyping, Simulation and Animation

The Caspoc Standard version is the most basic, yet fully functional version of Caspoc. It shows the possibilities of the Caspoc simulation and animation package. You can create your own models and perform simulations and animations. It comes with a number of examples, which show you what you can do with Caspoc. You can simulate and animate these examples and let yourself be amazed by the speed and flexibility that Caspoc offers you!



Power electronics

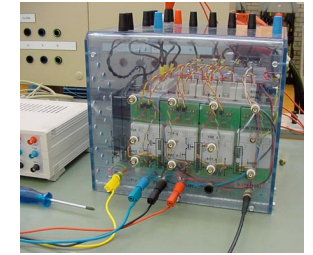
- 1-phase rectifiers
- 3-phase rectifiers
- Dc-dc converters
- Resonant converters
- Isolated SMPS
- Dc-ac inverters
- Ac-ac converters
- Transformers
- Small signal
- Discrete control
- Semiconductors

Electrical Machines:

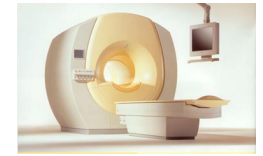
- Permanent magnet synchronous machine
- Induction machine (squirrel cage and wound rotor)
- Synchronous machines and generators, permanent magnet and externally excited
- Permanent magnet DC machines
- Brushless DC machines
- Series shunt and compound DC machines
- Switched reluctance machines
- Synchronous reluctance machines
- Stepper motors
- Automotive alternators (DC & 3 phase)

Electrical drives

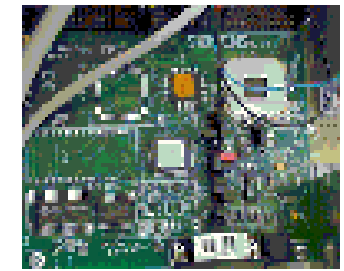
- Linear And Rotating
- Mechanical Systems
- Mechanical Loads
- DC Machines
- Transformations
- Modulation Principles
- Encoders
- Induction Machines
- Vector Control
- Controlled Drives
- Micro-stepping



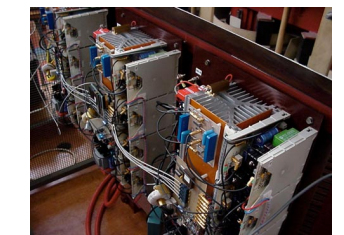
Flexible modeling and high simulation speed.



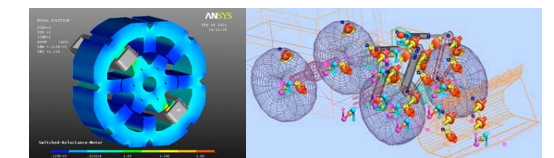
Caspoc is a fast simulation and animation tool that has no convergence problems.



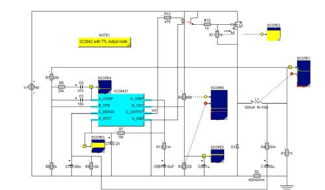
Caspoc exports ANSI C code for any processor or DSP.



Complex control systems require flexible modeling languages.



Coupling to various design/simulation tools, such as ANSYS, IES-BEMFEM, and smartFEM



Power Semiconductor and IC models

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www.caspoc.com