# **Interactive Power Electronics** & Electrical Drives Animation and Teaching!





Simulate and Animate complex control systems in Power Electronics and Electrical Drives.

Multimedia and Simulation/Animation technologies in the classroom make studying more attractive to students. It also makes teaching much easier. Especially in engineering classes, complex technical problems should be presented in a way that is easy to follow and understand.

Animation during simulation opens up new possibilities for teachers and students. It enables students to actively participate in the learning process. Here, interactive animation might help a lot - its utilisation in simulation enables to create an interactive training environment.

Simulation and Animation in CASPOC is the software choice in the European INETELE project for Development of Multi-Media Teaching Material for Interactive and E-Based Education in Electrical Engineering.



Caspoc is a fast simulation and animation tool with many samples!

INETELE is initiated by the European Leonardo da Vinci project.





Learn everything about Power Electronics and Electrical Drives.

#### What INETELE offers you:

- Many modules ready for self-study!
- Lots of animations

aspoc

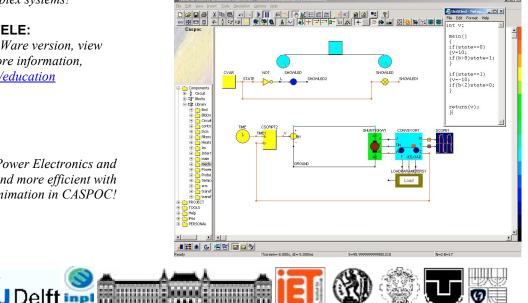
Simulation Research

- Many examples for self-study!
- Easy modeling of complex systems!  $\geq$

#### Learn how to use INETELE:

 $\triangleright$ Get your Caspoc FreeWare version, view the modules, or for more information, visit www.caspoc.com/education

**CASPOC & INETELE** 



Understand complex Power Electronics and Electrical Drives faster and more efficient with Simulation and Animation in CASPOC!

Visit www.caspoc.com/education for more information and a FreeWare version.

# INETELE

Development of Multi-Media Teaching Material for Interactive and Unified E-Based Education and Training in Electrical Engineering

### Institutions

- Montanuniversität Leoben, Institut für Elektrotechnik, A
- Brno University of Technology, Faculty of El. Eng. and Communication Technology, CZ
- Institut National Polytechnique de Lorraine, Nancy, F
- National Technical University of Athens, GR
- Budapest University of Economics and Technology, Budapest, HU
- Silesian Technical University, Faculty of El. Engineering, Gliwice, PL
- Technical University of Kosice, Faculty of El. Engineering and Informatics, SK
- Delft University of Technology, NL
- Simulation Research, NL

## Modules

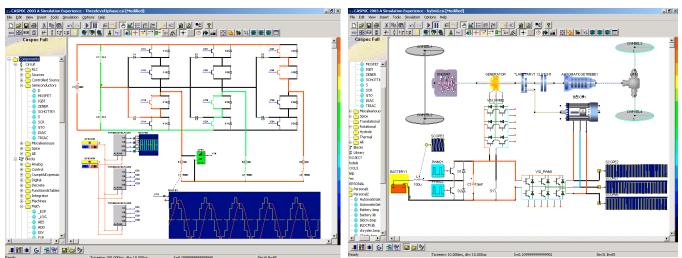
- 1. CAD and Applied SW in Electrical Engineering
  - 1.1 Automatic Design and Projecting in EE
  - 1.2 Simulation of Power Electronics
  - 1.3 FEM in CAD of Electromechanical and Electromagnetic Devices
- 2. Fundamentals of Electrical Engineering
  - 2.1 Electro-Static Circuits
  - 2.2 Magnetic Circuits
  - 2.3 Electrical DC Circuits
  - 2.4 Electrical One-phase Circuits
  - 2.5 Electrical Three-phase Circuits
  - 2.6 Electrical Measurement

### 3. Electrical Machines

- 3.1 Basic Principles of Electrical Machines
- 3.2 Transformers
- 3.3 DC Machines
- 3.4 AC Machines (Asynchronous and Synchronous)
- 4. Electronics and Power Electronics
  - 4.1 Practical Electronics
    - 4.2 Power Electronic Devices
    - 4.3 Power Electronics
    - 4.4 Control in Power Electronics
    - 4.5 Harmonic Treatment in Power Systems
    - 4.6 Power Electronic Applications (Power Quality, FACTS, Industrial Applications)

# 5. Electro-Mechanical Systems, Motion Control and Mechatronics

- 5.1 Electrical Drives Fundamentals
- 5.2 Controlled Electrical Drives
- 5.3 Motion Control
- 5.4 Automotive Electrical Systems
- 5.5 Mechatronic Systems



Three level inverter in Caspoc

Automotive in Caspoc