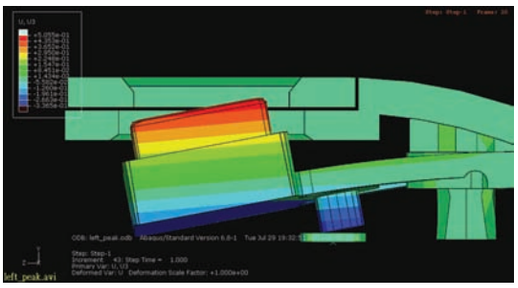

Figure 1.12: A process simulation for a notebook power button is performed using Abaqus to analyze the stress caused when pushed. Realistic simulation enables design engineers to evaluate whether the notebook's power button meets performance requirements. (Image courtesy of ASUSTeK Computer, Inc.)

Simulation automation and optimization

Isight, which became part of our product portfolio in 2007, provides engineers with a suite of interactive tools for creating simulation process flows – consisting of a variety of applications, including commercial CAD/CAE software, internally developed programs, and Excel spreadsheets – in order to automate the exploration of design alternatives and identification of optimal performance parameters. Isight enables users to automate simulation process flows and leverage advanced techniques such as Design of Experiments, Optimization, Approximations, and Design for Six Sigma to thoroughly explore the design space. Advanced, interactive postprocessing tools allow engineers to explore the design space from multiple points of view.

Managing simulation IP

Electronic product development companies continue to expand their use of coupled models for multi-field, multiphysics, and multi-scale applications resulting in data being transferred from one model to the next. They are also performing more simulations due to faster computing resources and the need to reduce physical testing. This activity is driving the need for solutions that allow engineers to capture and share simulation workflows while managing applications, computing resources, and simulation results. SIMULIA has responded to this industry demand by developing a product suite for Simulation Lifecycle Management (SLM). SLM accelerates product development by providing timely access to the right information through secure storage, search, and results visualization.

Customer engagements

SIMULIA is proactively engaged in the electronics industry. Our global team and customers present regularly at industry conferences (visit our website to download several of these papers). Our customers also participate in SIMULIA customer review meetings to provide input on their simulation requirements. We are responding to their requests by enhancing our product portfolio with robust technology for multiphysics, design optimization, and simulation lifecycle management. As a result, our customers are solving more complex engineering problems with fewer simplifying assumptions. Our goal is to help our customers create the next "must-have" electronic device faster and more affordably than ever before.

Figure 1.13: Virtual drop tests of a cell phone are performed using Abaqus to analyze the stress and strain of main parts as the phone strikes a surface from various directions. Realistic simulation enables design engineers to evaluate whether the stiffness of the phone's components meets performance requirements. (Image courtesy of Lenovo)

Neues von den Projekten

www.edacentrum.de/newsletter

NANO-TEC: Building an joint Design-Technology Community for Nanoelectronics in Europe

Electronic System Design in Europe will need a strong R&D competence to handle technology in emerging design processes in the next decades. The European Commission is funding a project NANO-TEC ("ECOSYSTEMS TECHNOLOGY and DESIGN for NANOELECTRONICS") where leading stakeholders in Nanotechnologies R&D are working together with design experts. The new Coordination Action (CA) within FP7 ICT Work programme from Call 5 has been started in September 2010. They try to find answers which technology seems to be the most attractive fitting into industrial design environments in 10–20 years.

Objectives and impact of NANO-TEC

Scaling CMOS technology is coming to an end in the next decades. Most of the experts are sure about this. The question is when? And: what comes next or complementary to CMOS? To explore the opportunities of breaking new technologies, design and technology have to go hand in hand. These are two building blocks needed for a healthy progress of European research on nanoelectronics. Today, they are not sufficiently integrated in research targeting the next but one or more advanced generations in nanoelectronics.

The capability of the European industry to transfer and exploit research results on this field depends on the extent to which the design and technology communities will provide integrated solutions. There are fascinating and ground-breaking results from research based on single atoms, molecules, single nanowires, small pieces of graphene and DNA strands, to name just a few. However, these have to be integrated into either existing or future system platforms, and usually have to meet design at this stage as an afterthought!

The objective of this Coordination Action is to address this mismatch by bringing the design and technol-

SEVENTH FRAMEWORK PROGRAMME

Funding Label:
ICT-2010-257964

Runtime:
01/09/2010–10/31/2012

Homepage:
www.fp7-nanotec.eu