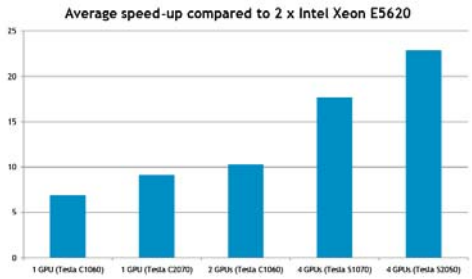
- PRESS RELEASE -

New HPC capabilities for CST MICROWAVE STUDIO 2011

June 7, 2011, Baltimore, MD, Computer Simulation Technology (CST) announces the release of new high performance computing options for CST MICROWAVE STUDIO® version 2011 SP3, at IMS 2011 booth #1423.

A well known trend in microwave & RF device design is the increase in device complexity, with an accompanying decrease of time allowance for the R&D process. Electromagnetic simulation can reduce the number of prototyping cycles, but the increase in simulation model size still represents a special challenge. This is addressed by high performance computing (HPC) techniques

The CST Simulation Acceleration scheme provides customers with a choice of HPC features. Notably the GPU computing capability has proven to be a success, since significant speed-ups can be achieved with a very reasonable investment. The CST MICROWAVE STUDIO 2011 transient solver now supports NVIDIA® Tesla™ 20 series (codename Fermi). Employing the new generation of GPUs, results in a remarkable increase in performance.



Cluster computing is the best option for exceptionally large or complex models. Communication between nodes is becoming a critical bottleneck, in particular if the nodes are equipped with GPUs. CST's MPI solution now supports Infiniband, a high throughput, low latency interconnection that helps ensure the solution's scalability. Besides the established solutions for the CST MWS transient and direct Integral Equation solver, MPI based parallelization is now also available for the Integral equation solver with MLFMM. This solver is dedicated to the simulation of electrically very large problems.

CST STUDIO SUITE comes with a simple job-queuing system: the Job Control Center. In more complex computing environments, sophisticated external resource management or job-queuing systems might be required or are already operational. CST STUDIO SUITE version 2011 can be integrated easily with free or commercial systems such as the Load Sharing Facility (LSF) or the Oracle Grid Engine (OGE).

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"Our customers require optimal simulation performance in order to excel in today's competitive R&D landscape," said Martin Timm, Marketing Director, CST. *" We are ready to exploit all technical and algorithmic means to help them maintain their competitive edge."*

Availability

The described functionality is released with CST MICROWAVE STUDIO 2011 service pack 3. It is now available for download to customers with valid maintenance contract for the respective options.

About CST

CST develops and markets high performance software for the simulation of electromagnetic fields in all frequency bands. Its success is based on the implementation of unique, leading edge technology in a user-friendly interface. CST's customers operate in industries as diverse as Telecommunications, Defense, Automotive, Electronics, and Medical Equipment, and include market leaders such as IBM, Intel, Mitsubishi, Samsung, and Siemens. With 180 employees worldwide and a network of qualified distributors, over 220 people are dedicated to the development and support of its EM products in more than 30 countries.
CST's flagship product, CST MICROWAVE STUDIO® (CST MWS) is the market leader in Time Domain simulation. It enables the fast and accurate analysis of high frequency devices such as antennas, filters, couplers, planar and multi-layer structures and SI and EMC effects. CST MWS can offer considerable product to market advantages such as shorter development cycles, virtual prototyping before physical trials, and optimization instead of experimentation.

Further information about CST is available on the web at http://www.cst.com.

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Graphics

PR graphics can be downloaded from the news section of CST's website at:

http://www.cst.com/Content/News/Documents/news_item_167/1106_CSTS2_2011_HPC_PR.zip

"Average speed-up of different GPU-configurations compared to a workstation equipped with 2 Intel® Xeon® E5620 4 core processors. The benchmark example is a package which was simulated with various mesh resolutions"