

- PRESS RELEASE -

## CST Announces MPI Based Parallelization For CST MICROWAVE STUDIO v2009

Atlanta, GA, June 17<sup>th</sup> 2008 - Computer Simulation Technology (CST) announces ground-breaking performance enhancement to the market and technology leading CST MICROWAVE STUDIO® (CST MWS) time domain solver. A parallelization based on the Message Passing Interface (MPI) has been implemented in version 2009 which enables the solution to extremely large problems by employing computer clusters, thus extending the boundaries of 3D EM simulation.

Design engineers involved in the simulation of very complex and detail rich structures, such as multilayered PCB boards or electrically large structures, will benefit most from CST's latest development. By decomposing the calculation domain into several parts and distributing these parts to computers in a cluster, the simulation of models with many hundreds of millions of mesh nodes becomes feasible.

### Performance optimization at all levels

CST is working to ensure that the latest hardware developments are available to its customer base at all required levels. For workstations, through its collaboration with Intel®, and GPU hardware acceleration is offered through the partnership with Acceleware. Memory limitations on GPU accelerator cards make cluster computing of particular interest when model sizes exceed 96 million mesh nodes. The CST MWS MPI based parallelization runs on homogenous Windows or Linux clusters.

“Achieving reduced simulation time has always been the main focus of CST, whether by inventing innovative algorithms or through their efficient implementation,” said Dr Peter Thoma, Managing Director R&D, CST. “With MPI based parallelization, CST MICROWAVE STUDIO has taken another step forward in helping users to solve what was previously considered to be unsolvable, and within a reasonable time.”

### Availability

MPI based parallelization will be available as an option with the CST MICROWAVE STUDIO® v2009 transient solver, Q4 2008.

### **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 150 employees worldwide and a network of qualified distributors, over 190 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 (HF) devices such as antennas, filters, couplers, planar and multi-layer structures and SI and EMC effects. CST MWS offers 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 [www.cst.com](http://www.cst.com).

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### **For further information please contact:**

Ruth Jackson, Marketing Communications, CST

Tel: +49 6151 7303-752

Email: [info@cst.com](mailto:info@cst.com), Web: <http://www.cst.com>

### **Graphics**

The CST logo can be downloaded from the CST website:

<http://www.cst.com/Content/News/Details.aspx?newsId=117>