AVI Library

Additions Under LS-DYNA®

3D Fabric Impact
Stitched 2D Plain Weave Fabric Impact
2D Plain Weave Fabric Impact

Updated Website:

Heat Transfer / Thermal Analysis

www.heattransferanalysis.com

HP

Top Tips for Performance
and Power Efficiency in the Data Center

LS-DYNA®
Training Classes in China

FEA Information Announcements:

AVI Library Additions under LS-DYNA

    60e1 - 3D Fabric Impact
    60e2 - Stitched 2D Plain Weave Fabric Impact
    60e3 - 2D Plain Weave Fabric Impact

Updated Website: Heat Transfer – Thermal Analysis

    www.heattransferanalysis.com/

We welcome Kostech – Korea   www.kostech.co.kr

LS-DYNA Training Classes in China – Arup & ETA LS-DYNA distributors

Sincerely,

Art Shapiro	Editor	art@feainformation.com
Marsha Victory	President	mv@feainformation.com
Trent Eggleston	Business Manager	feaanswer@aol.com
Wayne Mindle	Graphics	wlm@lstc.com
Anthony Giaccana	Participant/Sites Manager	agiac99@aol.com

Table of Contents

AVI Library Additions – Textile Composites
Courtesy of Gaurav Nilakantan

The finite element meshes of these textile composites are set up using the software DYNAFAB (more information available at **www.nicomposites.com**). The simulations are run using LS-DYNA®. The purpose of this study is to investigate both material and architectural effects on the ballistic impact resistance of high strength 2D and 3D fabrics used in protective applications. Also of interest is the role of through-thickness tows or structural stitching in maintaining the structural integrity of a dry textile composite structure and enhancing layer-layer interactions of layers that may have otherwise separated from the structure after failure. The geometries and undulations are obtained from micrographs of commercially available high strength fabrics leading to realistic representations of the architecture. Using DYNAFAB, newly conceptualized geometries and architectures can also be easily set up and investigated. A yarn level of modeling resolution is used throughout.

3dFabric
AVI 60e1

This is a quarter symmetric FE model of a 4 in. x 2 in. dry 3D textile composite consisting of 5 layers of unidirectional warp and fill tows, that are interlaced with through-thickness or Z-tows that run parallel to the warp tows. The cross sectional shapes and undulations of each tow used in the FE mesh represent the actual geometry and architecture of the textile composite obtained from micrographs. The composite structure is held on the two shorter sides and impacted at the center by a rigid spherical projectile.

Stitched 2D Plain Weave Fabric
AVI 60e2

This is a quarter symmetric FE model of a 4 in. x 2 in. dry 2D plain weave fabric consisting of 3 layers. The warp yarns extend between the two shorter sides. The composite structure is held on the two shorter sides and impacted at the center by a rigid spherical projectile.

Plain Weave Fabric Impact
AVI 60e3

This is a quarter symmetric FE model of a 4 in. x 2 in. dry 2D plain weave fabric consisting of 3 layers. The layers are stitched together with a stitching pattern that runs parallel to the warp yarns and passes through all the gaps in between the yarn cross-over locations. Because of quarter symmetry used for computational reasons, the central warp yarn has symmetric stitches on either side. The composite structure is held on all four sides and impacted at the center by a rigid spherical projectile.

Gaurav Nilakantan
Center for Composite Materials
University of Delaware
Newark, DE 19711
Web: www.ccm.udel.edu

TOPCRUNCH – LS-DYNA Benchmarks - INTEL
www.topcrunch.org

Intel/Intel/SSG: Vendor/Submitter

Computer/Interconnect: Intel SR1560SF system/Information Not Provided
Submitted: February 13, 2009

Processor	#Nodes x #Processors per Node x #Cores Per Processor = Total #CPU	Time (Sec)	Benchmark Problem
Intel® Xeon® Quad Core X5482	16 x 2 x 4 = **128**	129	neon_refined_revised
Intel® Xeon® Quad Core X5482	8 x 2 x 4 = **64**	249	neon_refined_revised
Intel® Xeon® Quad Core X5482	4 x 2 x 4 = **32**	451	neon_refined_revised
Intel® Xeon® Quad Core X5482	2 x 2 x 4 = **16**	806	neon_refined_revised
Intel® Xeon® Quad Core X5482	32 x 2 x 4 = **256**	1157	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	1 x 2 x 4 = **8**	1572	neon_refined_revised
Intel® Xeon® Quad Core X5482	16 x 2 x 4 = **128**	1864	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	8 x 2 x 4 = **64**	3148	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	64 x 2 x 4 = **512**	5366	car2car
Intel® Xeon® Quad Core X5482	4 x 2 x 4 = **32**	5938	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	32 x 2 x 4 = **256**	8071	car2car
Intel® Xeon® Quad Core X5482	2 x 2 x 4 = **16**	11780	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	16 x 2 x 4 = **128**	14321	car2car
Intel® Xeon® Quad Core X5482	1 x 2 x 4 = **8**	23555	3 Vehicle Collision
Intel® Xeon® Quad Core X5482	8 x 2 x 4 = **64**	28167	car2car
Intel® Xeon® Quad Core X5482	4 x 2 x 4 = **32**	51324	car2car
Intel® Xeon® Quad Core X5482	2 x 2 x 4 = **16**	103008	car2car
Intel® Xeon® Quad Core X5482	1 x 2 x 4 = **8**	201888	car2car

LS-DYNA® Training in China (alpha order)

FEA Information is pleased to announce our China Participants, Arup & ETA are in the process of scheduling their 2009 training classes inclusive of:

- **LS-DYNA**
- **LS-OPT**
- **LS-PrePost**
- **ALE/FSI**
- **LS-DYNA Implicit**
- **LSTC Dummy Model Seminar**

The schedule will be published in our next month's issue, including local events and LSTC engineers attending.

Arup International Consultants(Shanghai)Co.,Ltd.
Stephen Zhao
Tel:86-21-61262888 Ext:2876
Contact: stephen.zhao@arup.com

ETA CHINA
Grace Su
Tel: 86-21-51875539-603
Contact: msu@eta.com.cn

VOLTAIRE Announcement
Voltaire Grid Director 4700

Voltaire is pleased to announce the launch of the Voltaire® Grid Director? 4700 and Unified Fabric Manager? Software (UFM?).

Voltaire Grid Director 4700

The Voltaire Grid Director 4700 is a high performance, ultra low latency and fully non-blocking InfiniBand switch for high performance clusters. It allows for configurations of up to 324 ports or double-sided 648 ports of 40 Gb/s per port InfiniBand connectivity. It also delivers an impressive 51.8 Tbps of non-blocking bandwidth with between 100 and 300 nanoseconds of port-to-port latency.

The switch's HyperScale? architecture provides a unique inter-switch link capability for stacking multiples of 324 ports to form highly scalable, cost effective, and low latency fabrics. As a result, I/O bottlenecks are removed, allowing applications to operate at maximum efficiency.

Key benefits of the Grid Director 4700 include:

- Extreme application performance by removing I/O bottlenecks
- Unlimited scalability across application, database and storage servers
- Simple and fast device management
- Support for longer and more varied cable options
- Fast fabric bring-up and advanced routing algorithms
- Advanced congestion management
- Zero down time guaranteed with no single point of failure and real-time fault notifications

For more detailed information on the Grid Director 4700 visit our web site www.voltaire.com/Products/Grid_Director_S witches/Voltaire_Grid_Director_4700

Unified Fabric Manager (UFM)

Unified Fabric Manager (UFM) is the industry's first comprehensive management software to optimize performance of server and storage fabrics. UFM enables data center operators to efficiently monitor and operate the entire fabric, increase application performance and maximize fabric resource utilization.

While other tools are device-oriented and involve manual processes, UFM's innovative application-centric approach is bridging the traditional gap between servers, applications and fabric elements, thus enabling cluster and data center administrators to easily deploy and manage both small and large clusters in performance-demanding environments.

Key benefits of UFM include:

- Unlimited scalability across application, database, and storage servers
- In-depth visibility of traffic behavior, fabric and device health
- Advanced congestion management
- Routing optimization based on workloads and topology
- Configurable threshold-based alarms for instant problem resolution
- Fabric partitioning and Class of Service configuration
- Central Device Management
- Web Services integration API for seamless integration in customer environments
- Enables multiple isolated application environments on a shared fabric

UFM is compatible with Voltaire's entire line of 20 Gb/s and 40 Gb/s switching platforms, including the just-announced Grid Director 4700.

Combined, the Grid Director 4700 and UFM provide the highest performance expected from InfiniBand.

For more detailed information on UFM visit our web site :

www.voltaire.com/Products/Unified_Fabric_Manager

Availability and UFM Free Evaluation Offer

The Grid Director 4700 and UFM will be available in Q2 2009. All customers are invited to participate in a free 30-day evaluation of UFM when it becomes available.

Register online for a FREE 30-day evaluation of UFM.

www.voltaire.com/Products/Unified_Fabric_Manager/ufm-eval

If you would like additional information on either of these new products, contact your Voltaire sales representative or email us at info@voltaire.com

www.voltaire.com

HP – Top Tips for Performance And Power Efficiency in the Data Center

by Susan Twombly, Feb. 2009
http://www.hp.com/cgi-bin/pf-new.cgi?IN=referer

If energy consumption is eating away at your budget and your peace of mind, here's something you should know: You don't have to sacrifice computing performance for energy efficiency. There are ways to drive more performance into a smaller energy footprint. These top tips from HP can show you how.

Analyze and plan your power-saving strategy

Take a first step towards reducing your carbon footprint with HP Energy Efficiency Services. A range of offerings can help you plan a sustainable energy-wise strategy and transition to more energy-efficient data center operations.

Find out how your power usage compares to industry best practices with an HP Energy Efficiency Analysis. This new service provides a thorough assessment of your data center to identify sources of inefficiency and create detailed improvement plans with cost/benefit estimates on the impact of those improvements.

Learn how to put the latest high-density cooling, power and energy-reduction design strategies to work in your new or existing data center with the HP Energy Efficiency Design Service. In addition to helping you balance space, performance and power efficiency, this new service helps you comply with worldwide environmentally accredited standards.

Implement your plan for energy-optimized performance

The energy-saving intelligence built into HP products and solutions can help put your data center energy-reduction strategy to work.

For example, the HP ProLiant BL460c G5 Server Blade is newly redesigned for energy efficiency and power-constrained environments and uses 44 fewer watts per blade. That can save more than 700 watts per enclosure compared to its predecessor – improving energy efficiency by up to 25 percent.[1]

HP ProLiant DL585 G5 Server ranked #1 in energy-efficient 4P performance on the SPECpower_ssj®2008 benchmark[2]. This industry-standard benchmark measures power consumption in relation to performance for server-class computers.

Help get the most out of data center energy with an HP BladeSystem c7000 Enclosure. Enhanced with a new HP 2400W High Efficiency Hot-Plug Power Supply, it allows busy blades to "borrow" power from idle blades. By placing half the power supply in standby, the enclosure can also reduce losses at low loads.

Measure, control and recapture power

HP BladeSystem, ProLiant and Integrity servers leverage HP Thermal Logic Technologies, which combine energy-efficient design with solutions for measuring and controlling power and cooling resources. As a result, you can pack more performance into your data center, while keeping power consumption in check.

For instance, with new HP Dynamic Power Capping software, you can reallocate energy resources by dynamically setting or "capping" the power drawn by servers.

Instead of over-provisioning and wasting power, you can reclaim that energy to increase the number of servers in a rack up to threefold.1

Measure your data center's power consumption and heat generation to spot potential improvement areas with an HP Thermal Assessment Service.

Consolidate and virtualize for less consumption, more growth

HP Consolidation Solutions can help you consolidate platforms, applications, network resources and management tools to reduce the number of data centers needed to support the business – decreasing energy consumption, even as demands grow. HP Data Center Consolidation Services can help optimize your consolidation initiative.

Boost energy-efficiency further by pooling and sharing data center resources with HP Virtualization Solutions. By dynamically allocating computing power to when and where it's needed on demand, virtualization can reduce wasted energy – without sacrificing performance or service levels.

You can jump-start your virtualization journey with an HP Virtualization Accelerator Service.

Step up your efforts

Find out more about how HP energy-efficiency solutions can help you get the better business outcomes you want and the better environmental outcomes you need to reduce your carbon footprint.

(1) HP Performance Engineering Team, 2008 research.

(2) Benchmark results reflect results published on www.spec.org as of January 28, 2009. HP ProLiant DL585 G5 SPECpower_ssj2008 result: 763 overall ssj_ops/watt.

For the latestSPECpower_ssj2008 benchmark results: www.spec.org/power_ssj2008 .

SPEC, the SPEC logo, and the benchmark name SPECpower_ssj are registered trademarks of the Standard Performance Evaluation Corporation (SPEC). Results stated above reflect results published as of January 28, 2009. For the latest SPECpower_ssj2008 benchmark results, visit www.spec.org/power_ssj2008 . The SPEC logo is © 2009 Standard Performance Evaluation Corporation (SPEC), reprinted with permission.

LS-DYNA® and Related Courses LSTC & Worldwide 2009

Information on LSTC classes contact jane@lstc.com

Course	Price	Dates
Advanced - Impact Analysis	**$950**	**MI June 23-26**
Advanced Options	**$750**	**MI June 11-12, 2009** **CA Sept 07-08, 2009** **MI Dec 10-11, 2009**
ALE/Eulerian & Fluid/Structure Interaction	**$750**	**CA July 15-17, 2009**
Blast & Penetration	**$1,250** minimum 15 students	**CA Apr. 02-03, 2009** **MI Oct. 22-23, 2009**
Composite Materials	**$750**	**CA June 23-24, 2009**
Concrete and Geomaterial Modeling (min 3 students)	**$1,000**	**CA Sept. 24-25 2009**
Contact	**$750**	**CA March 19-20, 2009** **CA June 25-26, 2009** **MI Sept 10-11, 2009**
Element-free Galerkin	**$400**	**MI July 21-22, 2009**
Heat Transfer & Thermal-Stress Problems	**$500**	**To be announced** **contact Art Shapiro for information** **shapiro@lstc.com**
Implicit	**$750**	**CA June 29-30, 2009** **MI Sept 21-22, 2009**
Introduction to LS-DYNA **LS-PrePost is no fee and held the day prior to dates shown**	**$750**	**CA May 05-08, 2009** **CA Aug 04-07, 2009** **CA Nov 10-13, 2009** **MI March 17-20,2009** **MI June 16-19, 2009** **MI Sept 15-18, 2009** **MI Dec 15-18, 2009**
Introduction to LS-OPT	**$750**	**MI April 14-17, 2009** **CA Nov 3-6, 2009**
Material Modeling Using User Defined Options	**$750**	**CA July 01-02, 2009**
MESH Free Methods (SPH and EFG)	**$750**	**CA Dec 08-11, 2009**

Please check with the listed Company for accuracy of dates/courses.

FEA Information participants are invited to post classes, for details contact Anthony agiac99@aol.com

Courses are in Alpha Order	Country	Company	Date
Contact Simulation	Germany	CADFEM	11-Mar
Introduction to LS-DYNA	Germany	DYNAmore	18-Mar
Introduction to LS-DYNA	Germany	DYNAmore	23-Apr
Introduction to LS-DYNA	Germany	CADFEM	18-Mar
Introduction to LS-DYNA	Sweden	ERAB	9-Mar
Introduction to LS-DYNA Explicit	France	AS+	17-Mar
LS-DYNA SPH	France	AS+	1-Apr
Material Models	Germany	CADFEM	25-Mar

Paul Du Bois LS-DYNA Courses			
Blast & Penetration	USA	LSTC	1-Apr
Blast & Penetration	France	ALYOTECH	8-Oct
Crash Analysis	Germany	DYNAmore	11-May
Crash Analysis	Germany	DYNAmore	1-Dec
Crash Analysis	Germany	CADFEM	5-May
Crash Analysis	Germany	CADFEM	24-Nov
Crash Analysis	France	ALYOTECH	17-Mar
Crash Analysis	SWEDEN	ERAB	26-May

NEC Electronics Expands lineup of 32-bit Microcontrollers with Built-in Ethernet Interface and Large Capacity Memory
All Flash Microcontroller with Ethernet, USB2.0, and CAN functionality

Complete Article located on NEC Website Page NEC Electronics

KAWASAKI, Japan, DUESSELDORF, Germany, SANTA CLARA, Calif. (U.S.A.), February 17, 2009– NEC Electronics Corporation today announced that it has developed nine new 32-bit All Flash microcontrollers (MCUs) with built-in Ethernet interface and embedded flash memory. The new products are ideal for remote and supervisory control of industrial devices and building-management systems and include six 128-pin variants, named V850ES/JH3-E and three 144-pin variants, named V850ES/JJ3-E.

The new products have the following features: (1) Integrated Ethernet media access controller (MAC) channel, eliminating the need for an external Ethernet controller; (2) Up to 512 kilobytes (KB) of flash memory and up to 124 KB of random access memory (RAM), making it possible to run network software using on-chip memory alone; (3) Peripheral functions including full speed USB 2.0 interface and CAN interface.

Originally deployed as a networking technology for office computers, servers, and office automation equipments, Ethernet is now the world's most widespread wired local area network (LAN) technology. Over the next few years, Ethernet is expected to be further used for remote and supervisory control of industrial devices, building-management systems, home networks, and utility meters for the gas, water, and electricity. Factory Automation equipments in particular has been a field in which designers traditionally used proprietary network architectures but with the growing popularity of Ethernet, more and more developers are moving to Ethernet to facilitate network communication.

To add Ethernet functionality in the past, designers typically had to add a separate Ethernet controller in addition to high-capacity external memory for network software, which is why NEC Electronics designed its new MCUs with those features built-in. The large amount of integrated memory eliminates the need for any external memory by making it possible for systems to run network software using onboard memory alone. The integration of the Ethernet and large memory allow designers to build systems at lower cost than using external components.

The new product has the following significant features:
(1) On-chip Ethernet media access controller (MAC)

Each of the new MCUs integrates one-channel IEEE 802.3-compliant 10/100Base-T Ethernet MAC (note). This eliminates the need for an external Ethernet controller, making it possible to build a connected system at low-cost.

(2) Up to 512 KB of embedded flash memory and 124 KB of RAM

With up to 512 KB of flash memory and up to 124 KB of RAM, the V850ES/Jx3 family of MCUs can execute 103 Dhrystone million instructions per second (MIPS) at a clock speeds of 50 MHz. This makes it possible to run network software and system control program using its internal memory only, thereby facilitates the overall development process.

(3) Extensive variety of peripheral functions

The new products include full-speed USB 2.0 interface, CAN interface, a motor control timer, and a real-time counter. These

features allow designers to implement industry-standard communication technologies and to reduce external components and trim system development costs.

(4) Network software

NEC Electronics provides a wide array of network software, including an optimized Ethernet driver, and a lightweight transmission control protocol/Internet protocol (TCP/IP) stack.

NEC Electronics believes this new lineup of MCUs to be optimized for creating networked products in such fields as Industrial Ethernet applications, I/O converters and modules, industrial routers and hubs, test & measurement equipment, security control panels, utility meters, and connected industrial motor drives, and plans to market them actively.

See appendix for additional specifications of the new products.
Pricing and Availability

The sample prices of these new products vary depending on memory capacity, package type, and number of pins. For example, the 144-pin V850ES/JJ3-E MCU with 512 KB of Flash memory and 124 KB of RAM is priced at U.S. $ 12 per unit. Mass production of these new products is scheduled to begin in December 2009 and is expected to reach a monthly production of 1,000,000 units by 2011. Pricing and availability are subject to change.

Exhibition at Embedded World 2009

NEC Electronics plans to show demos of its new MCUs in booth 9-447 at the Embedded World 2009 in Nuremberg, Germany, from March 3-5.

(Note)
Ethernet MAC: Ethernet Media Access Controller (MAC) (10/10 Obase-T) compliant with IEEE802.3 definition. A function that controls transmission of data unit and error detection when controlling data transmission.
(Remark 1) All Flash, V850ES/JH3-E and V850ES/JJ3-E are trademarks or registered trademarks of NEC Electronics Corporation in Japan, the U.S and other countries.

(Remark 2) SuperFlash memory technology used in NEC Electronics' 32-bit devices is licensed from Silicon Storage Technology Inc. SuperFlash is registered of Silicon Storage Technology in the U.S., Japan, and other countries.

About NEC Electronics Corporation
NEC Electronics Corporation (TSE: 6723) specializes in semiconductor products encompassing advanced technology solutions for the high-end computing and broadband networking markets; system solutions for the mobile handset, PC peripheral, automotive and digital consumer markets; and multi-market solutions for a wide range of customer applications. NEC Electronics Corporation has subsidiaries worldwide including NEC Electronics America, Inc. and NEC Electronics (Europe) GmbH. More information about NEC Electronics worldwide can be found at www.necel.com.

SGI Deploys Ireland's Fastest Supercomputer (with Panasas parallel storage)

At Irish Centre for High-Performance Computing, new SGI Altix ICE system powers climate change and life sciences research

Sunnyvale, Calif. —February 5, 2009 — Ireland's most powerful computer was installed in three hours and powered up in just one day, thanks to a rapidly deployable computing platform from Silicon Graphics, Inc. (SGI) that is transforming what users can expect from supercomputer deployments.

Installed in November at the Irish Centre for High-End Computing (ICHEC), "Stokes," a new SGI Altix ICE 8200 system that operates at up to 25.1 trillion operations per second, is ranked No. 117 on the TOP500 list of the world's fastest computers. Perhaps more significantly, the latest ICHEC supercomputer delivers 87.6 percent of its peak performance when running the LINPACK benchmark -- the best efficiency of any industry-standard system appearing in the list's top 225 systems. This remains a serious factor for scientific and engineering institutes that use MPI and seek to minimize run times, processor counts and power use while maximizing job throughput.

ICHEC selected Silicon Graphics after a competitive evaluation in which the SGI Altix ICE system delivered the highest performance in benchmark tests. Other factors included low cost of ownership, Silicon Graphics' renowned application support and collaboration with customers, positive assessments from other SGI Altix ICE users, and the reliability and scalability of the acclaimed integrated blade platform.

The purchased was financed mainly through e-INIS, a national collaborative project coordinated by the Dublin Institute for Advanced Studies and funded by Ireland's Higher Education Authority together with contributions from University College Dublin and the National University of Ireland, Maynooth. Operated by ICHEC on behalf of the Irish research community, the system will allow national researchers to address some of the world's most pressing scientific challenges.

The Altix ICE system will accelerate efforts to develop whole-earth weather and climate models, perform complex DNA sequencing, and simulate the immune response to HIV infection.

"This new system from Silicon Graphics not only meets the application performance levels the company promised, but it exceeds them," said Dr. J.-C. Desplat, associate director at ICHEC, Ireland's first national computing center. "We now have a national resource that dramatically improves our ability to solve more complex problems involving ever-larger data volumes. The SGI Altix ICE architecture gives researchers the flexibility to pursue multiple courses of investigation rapidly and interactively -- a vital advantage that simply was not available to them before now. On top of all this, the ability to use Stokes so quickly means we don't have to keep researchers at bay during a long, frustrating deployment. With Silicon Graphics, we were up and running right away."

The Future of Supercomputing: Immediate ROI

The ICHEC system is the latest installation of an acclaimed SGI platform that typifies a new kind of supercomputer -- one that delivers world-class performance without requiring months to put into service.

With a tightly integrated and modular design that simplifies deployment, the SGI Altix ICE platform allows customers to realize a return on their investment sooner than is possible with traditional supercomputer systems. For

instance, the ICHEC system was available to users within three weeks of arriving on site.

"Now more than ever, organizations are under pressure to quickly derive value from their strategic technology investments," said Dr. Eng Lim Goh, chief technology officer of Silicon Graphics. "ICHEC's Stokes system makes good on that promise, delivering nearly immediate productivity to researchers with one of the world's most powerful supercomputers. Silicon Graphics is proud to provide the Republic of Ireland with this vital national resource."

Additional Details on Stokes:

- Stokes is powered by 640 Intel Xeon processors (totaling 2,560 cores) and features 5.1 trillion bytes, or terabytes (TB), of memory. It is connected via InfiniBand an 84TB Panasas ActiveStor parallel file storage solution.
- The Panasas solution utilizes Panasas' InfiniBand routers for seamless connectivity between compute and storage systems.
- Reflecting the industry-standard nature of the SGI Altix ICE platform, ICHEC's system was deployed in custom racks from APC.
- For more information on ICHEC research projects, visit: www.ichec.ie/research

About e-INIS -- The Irish National e-Infrastructure

e-INIS (http://www.e-inis.ie) is a federation of core electronic infrastructure providers dedicated to the provision of a sustainable national e-infrastructure for the support of advanced research activities in Ireland. The project is funded under the Irish Higher Education Authority's Programme for Research in Third-Level Institutions (PRTLI), a component of the National Development Plan. By coordinating and consolidating the activities of the national research infrastructure providers, e-INIS provides a cohesive e-infrastructure of a scale that enables internationally competitive research. The acquisition of the SGI Altix ICE, by project partners ICHEC, is part of ongoing strategic activities intended to rationalise national investment in world-class ICT and support infrastructure.

About Silicon Graphics, Inc.
Silicon Graphics, Inc. (SGI) (NASDAQ: SGIC), is a leader in high-performance computing. SGI delivers a complete range of high-performance server and storage solutions along with industry-leading professional services and support that enable its customers to overcome the challenges of complex data-intensive workflows and accelerate breakthrough discoveries, innovation and information transformation. SGI solutions help customers solve their computing challenges whether it's enhancing the quality of life through drug research, designing and manufacturing safer and more efficient cars and airplanes, studying global climate, providing technologies for homeland security and defense, or helping enterprises manage large data. With offices worldwide, the company is headquartered in Sunnyvale, Calif., and can be found on the Web at www.sgi.com.

About Panasas

Panasas, Inc., the global leader in parallel storage solutions, helps commercial, government and academic organizations accelerate their time to results leading to real world breakthroughs that improve people's lives. Panasas' high-performance storage systems enable customers to maximize the benefits of Linux clusters by eliminating the storage bottleneck created with legacy network storage technologies. Panasas ActiveStor Parallel Storage Clusters, in conjunction with the ActiveScale® Operating Environment and PanFS™ parallel file system, offer the most comprehensive portfolio of storage solutions for High Performance Computing (HPC) environments. Panasas is headquartered in Fremont, California. For more information, please visit www.panasas.com.

Panasas, ActiveScale, DirectFLOW and PanFS are trademarks or registered trademarks of Panasas, Inc. All other trademarks are the property of their respective owners.
###

Panasas, Inc. Media Contact

Derek James - McGrath/Power Public Relations

408-727-0351

derekj@mcgrathpower.com

d3VIEW is a web-based tool that extracts information from LS-DYNA generated "d3hsp" files and presents it in a concise, user-friendly format.

Background

The tool was developed as a hobby project by Suri Bala to ease the review of user provided input and result files in a concise and efficient manner. Suri Bala works full-time at Livermore Software Technology Corporation.

Among the information that can be found on the D3View is the page

Discrete variables in LS-OPT

Published by Suri Bala February 9th, 2009 in LS-DYNA Bytes.

Starting version 3.0, LS-OPT supports the definition of discrete variables. Discrete type of design parameters are helpful when there is a need to find the optimum values from a "set" of values. A good example would be the choice of element formulation. The possible values for LS-DYNA for a quad can only be a subset of formulations listed under ELFORM in SECTION_SHELL. Any value chosen by LS-OPT that does not uniquely match the subset will result in non-physical or error terminations by the solver such as LS-DYNA.

To enable discrete variables, the user has to mark the variable as 'Discrete' and provide a sequence of values separated by either a comma or a space. Discrete sampling of this definition is then performed by LS-OPT in two ways as defined below.

1. Continuous Discrete Sampling.

This sampling approach uses ALL possible values between the lower and the upper bound of the discrete set. For example if the discrete set consists of "2,10,16", then any value that lies within 2 and 16 is considered as a valid sampling point.

2. Discrete Sampling

In this sampling, LS-OPT will only use values from the set with no interpolation. For the set 2,10,16, only values from the three will be used. Currently, this approach works for D-OPT and SPACE-FILLING sampling schemes only.

Thanks to Dr. Nielen Stander for sharing this information.
Thanks to Dr. Nielen Stander for sharing this information.

LS-PrePost® Support Site: http://www.lstc.com/lspp

Introduction to LS-PrePost

LS-PrePost is an advanced pre and post-processor that is delivered free with LS-DYNA. The user interface is designed to be both efficient and intuitive. LS-PrePost runs on Windows, Linux, and Unix utilizing OpenGL graphics to achieve fast rendering and XY plotting. The latest builds can be downloaded from LSTC's FTP Site.

2009 January

10-Feb

Added BestFit Interface for evaluating how well a formed part matches an ideal geometry

10-Feb

Added some options (Adjac., Attach) to the General Selection Interface

December

08-Dec

Updated the Ident Interface to make use of the General Selection panel
08-Dec

Updated the Blank Interface to make use of the General Selection panel

November

21-Nov

Added support for multiple integration points per layer for *ELEMENT_SHELL

21-Nov

Added ability to display section force vectors on a model while plotting *SECFORC* data using the ASCII Interface (with *D3PLOT* files loaded)

21-Nov

Added ability to write relative *BOUNDARY_PRESCRIBED_MOTION

curves using the Trace Interface while a Follow point/plane is set

Key Pre-Processing Features:

*Importing and combining multiple models

*Improved renumbering of model entities

*Model Manipulation
Translate, Rotate, Scale, Project, Offset, Reflect

*LS-DYNA Entity Creation
Coordinate Systems, Sets, Parts, Masses, CNRBs, Boxes, Spotwelds, SPCs, Rigidwalls, Rivets, Initial Velocity, Accelerometers, Cross Sections

*Special Applications
Airbag Folding, Dummy Positioning, Seatbelt Fitting,
Initial Penetration Check, Spotweld Generation using MAT_100

*Mesh Generation
2Dmesh Sketchboard, nLine Meshing, Tet-Meshing,
Automatic surface meshing of IGES and VDA data,
Meshing of simple geometric objects (Plate, Sphere, Cylinder)

LS-DYNA® Support Site:

At this site you will find answers to basic and advanced questions that might occur while using LS-DYNA

The Complete Copntact Thickness is posted on:

February 20, 2009

Contact Thickness

Options for controlling the thickness of shell elements within the contact routines:

OPTT: the thickness per material, specified in ***PART_CONTACT**

SFT: thickness scaling per material, from *PART_CONTACT

SST/MST: slave/master thickness given on ***CONTACT card**

SFST/SFMT: slave/master thickness scaling on ***CONTACT card**

THKCHG: flag to update thickness for single surface contacts, on the ***CONTROL_CONTACT** card

SSTHK: "use actual thickness" flag for single surface contacts, on the ***CONTROL_CONTACT card**

SPOTHIN: spotweld thinning parameter, on ***CONTROL_CONTACT**

ISTUPD: flag to update shell thicknesses, on ***CONTROL_SHELL**

How thicknesses are initially determined:

1. For each contact node, the contact thickness is set to the thickness of the shell element that contains it. If **SFST/SFMT** or **SFT** are set, scale the thickness (with SFT overriding SFST/SFMT). If **SSTHK** is 0 and the contact is single surface, limit thickness to 40% of the minimum edge length of the element.

2. If **SST/MST or OPTT** are set, overwrite the above with this value, with **OPTT** taking precedence.

LS-OPT® Support Site

Integrating ANSA

Complete Article can be found on:

www.lsoptsupport.com/howtos/integrating-ansa-1

Create Morphing-Boxes and -Parameters

- With the Morphing Tool you can reshape surface or volume mesh for optimization studies.
- Define morphing parameters to control the shape change.
- Save the file for example as model.ansa.
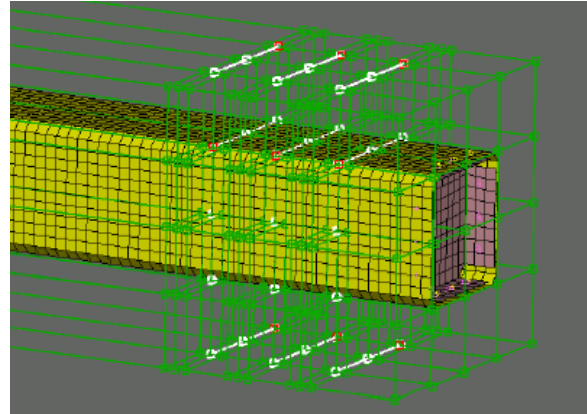
Set Up the Optimization Task
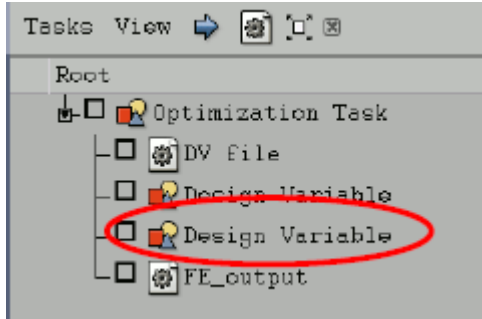
Define the pre-processing sequence that will be connected to LS-OPT. This sequence of actions will be invoked in every optimization loop and every action of it will be executed in the defined order modifying the shape and parameters of the model. All these actions take place before the run of the solver. When the sequence runs the following tasks are executed:

- Reading Design Variable values from ASCII file

- Modify the model according to the values of the ASCII file
- Output the model in LS-DYNA format

Save the Design Variable file for example as model.txt.

This file contains the Design Variable names and upper and lower bounds needed for the optimization.

[Integrating ANSA] continued

LS-OPT Set Up
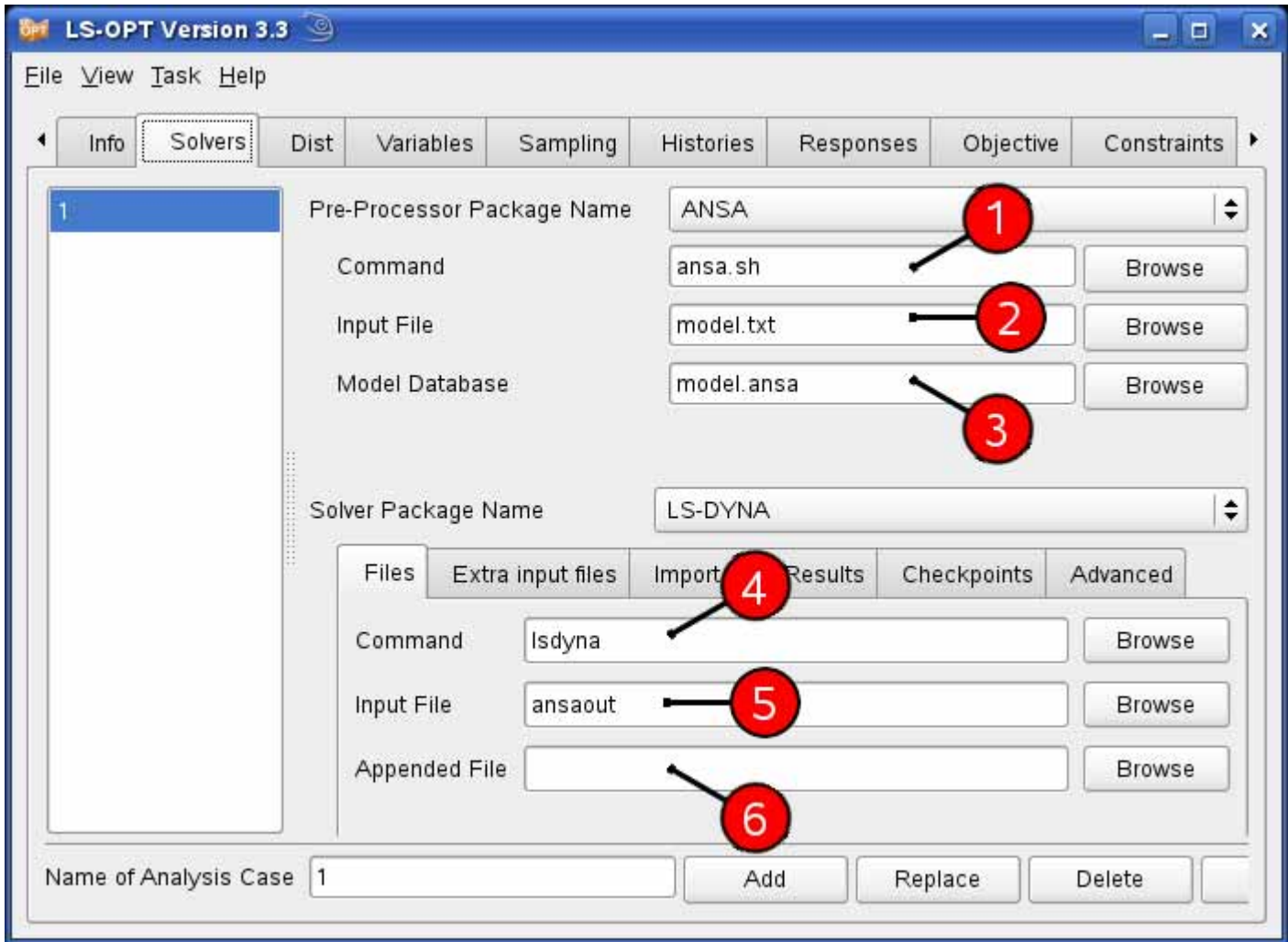
Several files must be specified:

1. ANSA executable, typically named ansa.sh. Do not use an alias.

2. ANSA design parameter file, typically with the extension .txt or .dat. This file is generated using ANSA and LS-OPT will read the ANSA design parameter names and values from this file. If LS-OPT already has a design variable with

the same name then this variable will be used to drive the value of the ANSA parameter.

3. ANSA binary database, typically with the extension .ansa.

4. LS-DYNA executable.

20

5. ANSA executed by LS-OPT outputs a file called "ansaout" regardless of the specification in the ANSA-Optimization-Task. "ansaout" can be used as include file, input file or appended file.

6. Optionally a file can be appended to the LS-DYNA input file. This file typically includes input that is not specified in ANSA; for example, output requests.

Example of the com-file:

```
$
$ DEFINITION OF SOLVER "1"
$ SOLVER "1" uses ANSA
solver dyna '1'
$
prepro ANSA
prepro command "/home/usr/bin/ansa.sh"
prepro input file "model.txt"
prepro database file "model.ansa"
$
solver command "lsdyna"
solver input file "ansaout"
$
```

LS-OPT Support Site:

LS-OPT, the graphical optimization tool that interfaces perfectly with LS-DYNA, allows the user to structure the design process, explore the design space and compute optimal designs according to specified constraints and objectives. The program is also highly suited to the solution of system identification problems and stochastic analysis.

LS-OPT Version 3.4 Released

LS-OPT Release Version 3.4

Book Recommendation Courtesy of Antonio Alonso Lopez

The following Book is highly recommended by Antonio Alonso Lopez - Madrid, Spain.

Inelastic Analysis of Solids and Structures (Computational Fluid and Solid Mechanics)

Antonio is a software developer very involved in implementation of material models for geomaterials.

"A book I have been using a lot of which I'm very proud to suggest is Inelastic Analysis of Solids and Structures (Computational Fluid and Solid Mechanics) by M. Kojic and K. J. Bathe

The Objective of This Book: Excerpt- ….

Finite element inelastic analysis is now abundantly performed in various branches of engineering design and scientific research. A number of commercial computer programs are I widespread use and many smaller research computer programs are employed for the inelastic analysis of solids and structures…..

Inelastic Analysis of Solids and Structures (Computational Fluid and Solid Mechanics)

Pre Post Processing Software

Livermore Software Technology Corporation

LS-PrePost is an advanced interactive program for preparing input data for LS-DYNA and processing the results from LS-DYNA analyses

Engineering Technology Associates, Inc

FEMB Engineering Technology Associates' Finite Element Model Builder (FEMB) is a finite element pre- and post-processor for use with all major analysis codes and CAD Software.

Japanese Research Institute, Ltd

JVISION is a general purpose pre-post processor for FEM software. Designed to prepare data for, as well as support, various types of analyses, and to facilitate the display of the subsequent results

Intelligent Light

FieldView provides LS-DYNA users powerful post-processing to quickly identify important characteristics in large and complex data and and allows interactive exploration to develop a thorough understanding. Examine and

compare cases, extract critical values, and make compelling presentations that make an impact.

Oasys, Ltd

Oasys Primer is a model editor for preparation of LS-DYNA input decks.

Oasys D3Plot is a 3D visualization package for post-processing LS-DYNA analyses using OpenGL® (SGI) graphics.

BETA CAE Systems S.A.

Provides complete CAE pre- and post-processing solutions. ANSA, the world wide standard pre-processor and full product modeler for LS-DYNA, with integrated Data Management and Task Automation. µETA, a thriving innovative software with special features for the high performance and effortless 3D & 2D post-processing of LS-DYNA results.

Simpleware

Provides software solutions for robust, fast, and easy conversion of 3D images into high quality meshes which can be used for FEA, CFD, CAD, RP.

Participant LS-DYNA® Resource Page (alpha order)

Fully QA'd by Livermore Software Technology Corporation

SMP and MPP Hardware and OS

FUJITSU

FUJITSU Prime Power	SUN OS 5.8
FUJITSU VPP	Unix_System_V

HP

HP PA-8X00	HP-UX 11.11. and above
HP IA-64	HP-UX 11.22 and above
HP Opteron	Linux CP4000/XC
HP Alpha	True 64

INTEL

INTEL IA32	Linux, Windows
INTEL IA64	Linux
INTEL Xeon EMT64	Linux, Windows 64

NEC

NEX SX6	Super-UX

SGI

SGI Mips	IRIX 6.5X
SGI IA64	SUSE 9 w/Propack 4 Red Hat w/ Propak 3

Participant LS-DYNA® Resource Page (alpha order)

Fully QA'd by Livermore Software Technology Corporation

MPP and Interconnect MPI

FUJITSU

	O/S	HPC Interconnect	MPI Software
FUJITSU Prime Power	SUN OS 5.8		
FUJITSU VPP	Unix_System_V		

HP

	O/S	HPC Interconnect	MPI Software
HP PA8000	HPUX		
HPIA64	HPUX		
HP Alpha	True 64		

INTEL

	O/S	HPC Interconnect	MPI Software
INTEL IA32	Linux, Windows	InfiniBand (Voltaire), MyriCom	LAM/MPI, MPICH, HP MPI, SCALI
INTEL IA64	Linux		LAM/MPI, MPICH, HP MPI
INTEL Xeon EMT 64	Linux	InfiniBand(Topspin, Voltaire), MyriCom, PathScale InfiniPath	LAM/NPI, MPICH, HP MPI, INTEL MPI, SCALI

NEC

	O/S	HPC Interconnect	MPI Software
NEX SX6	Super-UX		

SGI

SGI Mips	IRIX 6.5 X	NUMAlink	MPT
SGI IA 64	SUSE 9 w/Propack 4 RedHat w/Propack 3	Numalink, InfiniBand(Voltaire)	MPT, Intel MPI, MPICH

LS-DYNA® Resource Page - Participant Software

Interfacing or Embedding LS-DYNA - Each software program can interface to all, or a very specific and limited segment of the other software program. The following list are software programs interfacing to, or have the LS-DYNA solver embedded within their product. For complete information on the software products visit the corporate website.

ANSYS - ANSYS/LS-DYNA
ANSYS/LS-DYNA
Built upon the successful ANSYS interface, ANSYS/LS-DYNA is an integrated pre and postprocessor for the worlds most respected explicit dynamics solver, LS-DYNA. The combination makes it possible to solve combined explicit/implicit simulations in a very efficient manner, as well as perform extensive coupled simulations in Robust Design by using mature structural, thermal, electromagnetic and CFD technologies.

AI*Environment:
A high end pre and post processor for LS-DYNA, AI*Environment is a powerful tool for advanced modeling of complex structures found in automotive, aerospace, electronic and medical fields. Solid, Shell, Beam, Fluid and Electromagnetic meshing and mesh editing tools are included under a single interface, making AI*Environement highly capable, yet easy to use for advanced modeling needs.

ETA – DYNAFORM
Includes a complete CAD interface capable of importing, modeling and analyzing, any die design. Available for PC, LINUX and UNIX, DYNAFORM couples affordable software with today's high-end, low-cost hardware for a complete and affordable metal forming solution.

ETA – VPG
Streamlined CAE software package provides an event-based simulation solution of nonlinear, dynamic problems. eta/VPG's single software package overcomes the limitations of existing CAE analysis methods. It is designed to analyze the behavior of mechanical and structural systems as simple as linkages, and as complex as full vehicles.

MSC.Software - MSC.Dytran LS-DYNA
Tightly-integrated solution that combines MSC.Dytran's advanced fluid-structure interaction capabilities with LS-DYNA's high-performance structural DMP within a common simulation environment. Innovative explicit nonlinear technology enables extreme, short-duration dynamic events to be simulated for a variety of industrial and commercial applications on UNIX, Linux, and Windows platforms.

MSC.Software - MSC.Nastran/SOL 700
The MSC.NastranTM Explicit Nonlinear product module (SOL 700) provides MSC.Nastran users the ability access the explicit nonlinear structural simulation capabilities of the MSC.Dytran LS-DYNA solver using the MSC.Nastran Bulk Data input format. This product module offers unprecedented capabilities to analyze a variety of problems involving short duration, highly dynamic events with severe geometric and material nonlinearities.

MSC.Nastran
Explicit Nonlinear will allow users to work within one common modeling environment using the same Bulk Data interface. NVH, linear, and nonlinear models can be used for explicit applications such as crash, crush, and drop test simulations. This reduces the time required to build additional models for another analysis programs, lowers risk due to information transfer or translation issues, and eliminates the need for additional software training.

MSC.Software – Gateway for LS-DYNA
Gateway for LS-DYNA provides you with the ability to access basic LS-DYNA simulation capabilities in a fully integrated and generative way. Accessed via a specific Crash workbench on the GPS workspace, the application enhances CATIA V5 to allow finite element analysis models to be output to LS-DYNA and then results to be displayed back in CATIA.

Oasys software for LS-DYNA

Oasys software is custom-written for 100% compatibility with LS-DYNA. Oasys PRIMER offers model creation, editing and error removal, together with many specialist functions for rapid generation of error-free models. Oasys also offers post-processing software for in-depth analysis of results and automatic report generation.

Visual-CRASH For DYNA

Visual-Crash for DYNA helps engineers perform crash and safety simulations in the smoothest and fastest possible way by offering an intuitive windows-based graphical interface with customizable toolbars and complete session support. Being integrated in ESI Group's Open VTOS, an open collaborative multi-disciplinary engineering framework, Visual-Crash for DYNA allows users to focus and rely on high quality digital models from start to finish. Leveraging this state of the art environment, Visual Viewer, visualization and plotting solution, helps analyze LS-DYNA results within a single user interface. Visual Viewer performs automated tasks and generates customized reports therefore increasing engineers productivity..

APTEK

The MMCD is a graphics-based and menu-driven program that interfaces with the LS-DYNA library of material models and the LS-OPT optimization code. The core of the MMCD is the driver, which calculates the stress-strain behavior of material models driven by combinations of strain increments and stress boundary conditions, i.e. pure shear stress, and combinations of uniaxial, biaxial, and triaxial compression and tension. MMCD input and output is accessed via pre- and post-processors; graphical user interfaces (GUIs) for easily selecting the material model parameters and load histories, and for plotting the output in both two (stress-strain curves) and three (yield surfaces) dimensions. The pre-processor, driver, and post-processor are combined into a web downloadable software package that operates seamlessly as a single code.

BETA CAE Systems - ANSA

Is an advanced multidisciplinary CAE pre-processing tool that provides all the necessary functionality for full-model build up, from CAD data to ready-to-run solver input file, in a single integrated environment. ANSA is a full product modeler for LS-DYNA, with integrated Data Management and Process Automation. ANSA can also be directly coupled with LS-OPT of LSTC to provide an integrated solution in the field of optimization.

BETA CAE Systems - μETA

Is a multi-purpose post-processor meeting diverging needs from various CAE disciplines. It owes its success to its impressive performance, innovative features and capabilities of interaction between animations, plots, videos, reports and other objects. It offers extensive support and handling of LS-DYNA 2D and 3D results, including those compressed with SCAI's FEMZIP software.

OASYS Ltd: Markets engineering software products. Consulting engineers, planners and project managers working in all areas of the built environment.

JRI Solutions Ltd.: Specializing in Research & Consulting; System Consulting, Frontier Business, System Integration and Science Consulting.

HP: Leading provider of high performance computing solutions for CAE, including workstations, servers, blades and storage..

ANSYS Inc.: Develops, markets, supports and delivers collaborative analysis optimization software tools.

SGI: Silicon Graphics, Inc., is a leader in high-performance computing, visualization, and storage.

MSC.Software: Information technology software and services provider.. Products & services used to enhance & automate the product design/manufacturing process.

NEC: A history of more than 100 years of leadership/innovation in the core high-technology sectors of communications, computers/electronic components

INTEL: For more than three decades, Intel Corporation has developed technology enabling the computer and Internet revolution that has changed the world.

Engineering Technology Associates, Inc.: Provides engineering & IT services & has created the streamlined simulation software packages DYNAFORM and VPG

ESI Group: A software editor for the numerical simulation of prototype and manufacturing process engineering in applied mechanics.

BETA CAE Systems S.A.: Specialized in the development of state of the art CAE pre- and post-processing software systems.

Participant page is continued on next page

28

APTEK: Among the software developed APTEK develops and licenses an interactive program for driving LS-DYNA material models - the Mixed Mode Constitutive Driver (MMCD).

PANASAS: High performing Parallel Storage for scalable Linux clusters. Delivering exceptional scaling in capacity and performance for High Performance Computing (HPC) organizations.

Intelligent Light: A a world leader in the development and delivery of software for computational fluid dynamics (CFD) users. We help the world's best engineering and research organizations maximize the productivity and impact of their CFD capabilities

---

Voltaire: Voltaire is a leading provider of scale-out computing fabrics for data centers, high performance computing and cloud environments. Voltaire's InfiniBand-based solutions help software applications run simulations and product-design analysis faster.

LS-DYNA® Software Distributors

Alphabetical order by Country

Australia	Leading Engineering Analysis Providers
Canada	Metal Forming Analysis Corporation
China	Arup
China	ETA China
France	Alyotech
France	AS+
Germany	CAD-FEM
Germany	DYNAmore
India	Oasys, Ltd.
India	Cranes Softwaree Ltd.
India	EASi Engineering
India	CADFEM Engineering Services India
Italy	DYANmore
Italy	ENGINSOFT
Japan	The Japan Research Institute
Japan	ITOCHU Techno-Solutions Corporation
Japan	Fujitsu
Korea	Theme Engineering
Korea	Kostech
Netherlands	Infinite Simulation Systems BV
Russia	State Unitary Enterprise - STRELA
Sweden	Engineering Research AB
Taiwan	Flotrend Corporation

USA	Engineering Technology Associates, Inc.
USA	Dynamax
USA	Livermore Software Technology Corp.
UK	ARUP

Consulting and Engineering Services

Australia	**Leading Engineering Analysis Providers (LEAP)** **Greg Horner info@leapaust.com.au** **02 8966 7888**
Canada	**Metal Forming Analysis Corp. - (613) 547-5395** **Chris Galbraith galb@mfac.com**
Canada	**ROI Engineering Inc.** **(416)249-1471**
France	**Alyotech 33 (0)1 30 67 23 44** **Nima Edjtemai nima.edjtemai@alyotech.fr**
France	**AS+ 33 (0)5 61 44 54 98** **Vincent Lapoujade v.lapoujade@asplus.fr**
Netherlands	**Infinite Simulation Systems BV** **Jurgen Mathijssen j.mathijssen@infinite.nl**
UK	**ARUP - 44 (0) 121 213 3317** **Brian Walker brian.walker@arup.com**
UK	**GRM +44 (0) 1926 889300** **info@grm-consulting.co.uk**
USA	**KBEC L.C - (512) 363-2739** **Khanh Bui kdbui@sbcglobal.net**
USA	**SE&CS - (707) 837-0559** **Len Schwer len@schwer.net**
USA	**Engineering Technology Associates, Inc:** **(248) 729-3010**
USA	**Predictive Engineering - (1-800) 345-4671** **George Laird george.laird@predictiveengineering.com**
USA	**Friedman Research Corporation** **(805) 683-1300**
USA	**Structure Technology** **(920).722.7060**
USA	**CAE Associates, Inc** **(203) 758-2914**

Educational & Contributing Participants
Alphabetical Order By Country

China	Dr. Qing Zhou	Tsinghua University
India	Dr. Anindya Deb	Indian Institute of Science
Italy	Professor Gennaro Monacelli	Prode – Elasis & Univ. of Napoli, Frederico II
Russia	Dr. Alexey I. Borovkov	St. Petersburg State Tech. University
USA	Dr. Ted Belytschko	Northwestern University
USA	Dr. David Benson	University of California – San Diego
USA	Dr. Bhavin V. Mehta	Ohio University
USA	Dr. Taylan Altan	The Ohio State U – ERC/NSM
USA	Dr. Ala Tabiei	University of Cincinnati
USA	Prof. John D. Reid	University of Nebraska
USA	Professor Thomas Vasko	Connecticut State University

Informational Websites
The LSTC LS-DYNA Support site: www.dynasupport.com

LS-DYNA Support Site	FEA Informationwebsites
LS-DYNA Examples (more than 100 Examples)	LS-DYNA Conference Site
TopCrunch – Benchmarks	LS-DYNA Publications to Download On Line
LS-DYNA Publications	LSTC_LS-PrePost Tutorials
CADFEM GmbH Portal	LS-OPT Support Site
LS-DYNA Distributors	LS-DYNA Consulting

"3rd ANSA & µETA International Conference"

This is an excerpt: For full conference information visit:

http://www.beta-cae.gr/3rd_conference_announcement.htm

Being consistent to our biannual appointment and celebrating the 10 years since the establishment of **BETA CAE Systems S.A.**, it is our pleasure to invite you to participate in the **"3rd ANSA & µETA International Conference"** to be held on September 9-11, 2009, in Porto Carras Grand Resort Hotel, Halkidiki, Greece.

The principal aims of this event are to bring the CAE Community together with **BETA CAE Systems S.A.** and to promote an international exchange of the latest concepts, knowledge and development requirements on our flagship software products, **A**N**SA** & **µ**E**TA**. Technical papers will be presented outlining the latest advances in CAE strategy, methodology, techniques and applications related to our products.

Participants will have the chance to be informed about the latest software trends, demonstrate their concepts and achievements and present new development requirements.

….

…The conference will be of interest to decision makers, strategy & methodology planners, simulation experts, applications users and researchers at the forefront of the CAE simulation for various disciplines, coming from OEMs and suppliers from a wide spectrum of industrial sectors, specially from, but not limited to, the:

- automotive,
- motorsports,
- railway,
- aerospace,
- shipbuilding/offshore,
- electronics,
- energy,
- heavy machinery,
- medical/biomechanics,
- chemical processes and

- academic
- power tools,

A wide range of topics on various simulation application fields and disciplines will be covered, including:
- CAE strategy & process planning,
- Process automation,
- Product & Simulation Data Management (PDM / SDM),
- Durability,
- Crash & Rollover,
- Occupant & Pedestrian Safety,
- Dynamics,
- Noise, Vibration & Harshness,
- Computational Fluid Dynamics (CFD),
- Optimization,
- Composite materials modeling,
- Climate control,
- Engine technology,
- Heat transfer,
- Simulation results assessment, etc

Papers are invited on the outlined topics and others falling within the scope of the event.

Abstracts of approximately 250 words should be submitted for consideration by February 28, 2009. Abstracts should clearly state the purpose, results and conclusions of the work to be described in the final paper. The authors' name, organization, address, phone & fax numbers and email should be also clearly marked. The identification of the presenter among more than one authors should be also appreciated. Submission will be made electronically, by email. The language of the conference will be English. email: congress@beta-cae.gr

……..

UPDATE Speakers will receive free accommodation for the duration of the event, courtesy of BETA CAE Systems

S.A. Further information and instructions will be provided to those who respond to this call.

In order to keep a low overall budget for the participants, there is no participation fee.

Nevertheless, your registration is essential for the organization of the event.

Registration includes coffee breaks, dinner on September 8th, and meals on September 9th, 10th and 11th, 2009.

Return the registration form by fax or email no later than June 30, 2009, to:
BETA CAE Systems S.A.
fax: +30-2392-021828
email: congress@beta-cae.gr

Mrs. Photini Paraskevopoulou

BETA CAE Systems S.A.
tel: +30-2392-021914
fax: +30-2392-021828
email: congress@beta-cae.gr

Abstracts submission:
 February 28,2009

Acceptance notification:
March 14, 2009

Final manuscripts submission:
 June 20, 2009

Registration until: **June 30, 2009**

Event: **September 9 - 11, 2009**

2nd Call for Papers

7th EUROPEAN LS-DYNA® CONFERENCE

14th - 15th May 2009, Salzburg, Austria

The 7th European LS-DYNA Users Conference will provide an ideal forum for LS-DYNA users from all over the world to share and discuss their experiences, to obtain information on upcoming features of LS-DYNA and to learn more about new application areas. The conference will be accompanied by an exhibition featuring the latest software and hardware developments related to LS-DYNA.

It will take place at "one of the most beautiful regions on earth", as Alexander von Humboldt described Salzburg. The Old Town of Salzburg is a splendid example of baroque architecture and is awarded as UNESCO world heritage. Salzburg is also known as the birthplace of the famous composer Wolfgang Amadeus Mozart. The conference venue is located in the centre of Salzburg. Salzburg can be reached easily via freeway, the high speed train ICE, and the international airports of Salzburg or Munich.

We kindly encourage all users to contribute by submitting a paper. For registration please use the registration form attached.

The following keynote speakers have already confirmed their presentations:

Aircraft Industry
Blade Retention and Bird Impact
    M. Nucci (Snecma, F)

Automotive Industry
Multi-Disciplinary Optimization – Crash, NVH ...
    Dr. T. Zeguer (Jaguar Cars Limited, UK)
Material Modeling for Crash
    P. du Bois (Consultant, D)

Impact Applications
High Speed Impact - Test and   Simulation
    Prof. S. Hiermaier (Fraunhofer Institut EMI, D)

Metal Forming
  Trends and Developments
      Dr. W. Volk (BMW AG, D)
   Deep Drawing Processes
      Prof. J. Danckert (University Aalborg, DK)

Railway Industry
  Crashworthiness of Trains
      Dr. M. Seitzberger (Siemens AG, A)

Research
  Modeling of Wood
      Prof. J. Eberhardsteiner (TU Wien, A)

Validation & Verification
  Model Calibration with Experiments
      Prof. M. Langseth (NTNU Trondheim, NO)

Development of LS-DYNA
  General Developments
      Dr. J. Hallquist (LSTC, USA)
  Material Models
      Dr. B. Feng (LSTC, USA)

Development of LS-OPT
      Dr. N. Stander (LSTC, USA)

The Conference will be organized by DYNAmore with assistance from Alyotech, Arup, ERAB, and LSTC. The organizers are looking forward welcoming you in the beautiful city of Salzburg, Austria.

Call for Papers
     With your contribution either from industry or academia on applications on LS-DYNA and LS-OPT, we will achieve a successful User Conference in Salzburg.

The topics of your paper may cover the following applications:
- Crashworthiness
- Occupant safety
- Metalforming
- Optimization
- Robustness
- Spotwelding, bonding
- Implicit
- Pedestrian safety
- Impact, drop test
- Plastics
- Composites
- Ballistics and penetration
- Fluid structure interaction, CFD
- CAE process integration

From the industry sectors
- Automotive
- Aerospace
- Mechanical engineering
- Ship building / offshore
- Transportation
- Biomechanics
- Civil engineering
- Packaging industry

Conference Paper Submission
Please submit your paper by sending a short abstract to:
   cf09@dynamore.de.

Abstract deadline:
  06th February 2009
Acceptance notification:
  20th February 2009
Final paper deadline:
  03rd April 2009
Conference language:
  English

Conference Venue

Salzburg Congress
Auerspergstraße 6
5020 Salzburg, Austria
http://www.salzburgcongress.at

Some seminars and meetings will be held at the Hotel Bavaria, Bad Reichenhall, Germany.

Preliminary Conference Schedule

Wednesday, 13th May, 2009
  06:00 pm   Registration (- 9:00 pm)
  06:00 pm   Welcome Reception
Thursday, 14th May, 2009
  08:00 am   Registration
  09:00 am   Technical Papers
      (- 6:00 pm)
  08:00 pm   Conference Gala Dinner
Friday, 15th May, 2009
  08:30 am   Technical Papers
  04:00 pm   End of Conference

Exhibition / Sponsoring

If you would like to participate as an exhibitor or sponsor please ask for further information.

Registration Fees

Industry: 560,– Euro / 510,– Euro*
Academic: 390,– Euro / 350,– Euro*
* Early booking before 1st February 2009
+ VAT if applicable

Accomodation

Conference registrants can reserve a discounted room rate in hotels in Salzburg by using the congress www.dynamore.de/conference

accommodation booking service which is accessible through

www.dynamore.de/conference

Travel Information

By air: International Airports Salzburg or Munich
By train: ICE train station Salzburg

Outings

Optional partner program

Thursday, 14th May, 2009
- Salzburg city sightseeing
- "Fiaker" - sightseeing by horse cab
- Guided Salzburg Festival Halls tour

Friday, 15th May, 2009
- Salzburg city sightseeing
- "Fiaker" - sightseeing by horse cab
- The „Sound of Music" dinner show
- The Mozart dinner concert
- Optional post-conference program

Saturday, 16th May, 2009
- "Sound of Music" tour
- Guided Salzburg city sightseeing tour

Registration and Contact
DYNAmore GmbH
Industriestr. 2
D-70565 Stuttgart, Germany
Tel. +49 (0) 7 11 - 45 96 00 - 0
Fax +49 (0) 7 11 - 45 96 00 - 29
E-mail: cf09@dynamore.de

Additional Information

Pre- and Post-Conference Seminars at the 7th EUROPEAN LS-DYNA CONFERENCE

14th - 15th May 2009, Salzburg, Austria

Crashworthiness Simulation using LS-DYNA

This is an advanced course and applies to engineers which have experience in application of explicit programs or which bring along experience from the field of dynamic and nonlinear calculation with implicit programs. The aim of the course is to show how to perform a crashworthiness simulation in the automobile industry using LS-DYNA.

11th - 13th May 2009, 1.450.– Euro
Lecturer: P. Du Bois (Consultant)

Implicit Analyses using LS-DYNA

The seminar is designed for engineers intending to use LS-DYNA to carry out implicit analysis. Also, experienced 'explicit' users have the opportunity to learn more about the key issues to bear in mind when converting an explicit to an implicit input file.

12th - 13th May 2009, 980.– Euro
Lecturer: Prof. Dr. M. Pitzer (University of Applied Sciences Gießen-Friedberg)

Optimization with LS-OPT

The seminar gives an introduction to the optimization program LS-OPT and shows its possibilities and limits. LS-OPT is a powerful optimization software particularly suitable for highly nonlinear problems. LS-OPT is primarily intended to be used for general design optimization, shape optimization, parameter identification, DOE-studies and robustness or reliability analysis.

11th - 13th May 2009, 1.450.– Euro
Lecturer: Dr. N. Stander (LSTC)

Meshless Methods in LS-DYNA

This seminar will introduce attendees to the application of the meshless "Element-Free Galerkin" (EFG) and "Smooth Particle Hydrodynamics" (SPH) methods in LS-DYNA. The seminar will outline the theoretical bases and thoroughly refers to the settings required in the LS-DYNA input deck in order to carry out an EFG/SPH simulation.

12th - 13th May 2009, 980.– Euro
(490,– Euro per day, can be booked separately)
Lecturers:
   Dr. C.-T. Wu – EFG (LSTC),
   Dr. J. L. Lacome - SPH (Impetus-Afea)

User Interfaces in LS-DYNA

This seminar is designed for users in both industrial and academic research who intend to integrate their own routines in LS-DYNA and to share their implementation experience with a larger audience.

11th May 2009, 490.– Euro
Lecturer: Dr. T. Erhart (DYNAmore)

Modeling of Geomaterials with LS-DYNA 1)

The course starts from the common ground of introductory metal plasticity modeling and successively builds on this base adding the constitutive modeling features necessary to model geomaterials.

12th - 13th May 2009, 980.– Euro
Lecturer: Dr. L. Schwer (Schwer Engineering & Consulting Services)

PRIMER as a Preprocessor for LS-DYNA

In this seminar the practical use of PRIMER is arranged for the participant. All important functions are described and demonstrated in the context of a Workshops. On the basis of many training examples the participant learns the safe operation for different areas of application.

12th - 13th May 2009, 980.– Euro
Lecturer: R. Sturt (Arup)

Enhanced Possibilities and Special Settings for Metalforming Simulation in LS-DYNA

This seminar conveys the basics of the simulation of metalforming processes with LS-DYNA and provides information and hints for the application. Thereby it is particularly focused on the specific settings and features for the forming processes in LS-DYNA.

11th - 12th May 2009, 980.– Euro
Lecturer: Dr. A. Haufe (DYNAmore)

Metalforming Simulations with eta/DYNAFORM

The seminar offers an introduction to the simulation of metal forming processes with LS-DYNA. As preprocessor eta/dynaform is presented. The seminar introduces the different procedures to set up simulations for deep drawing. It covers one and multi step operations and presents the various options to post-process a results.

13th May 2009, 490.– Euro
Lecturer: P. Vogel (DYNAmore)

LS-DYNA Modeling of Blast & Penetration

This training class is intended for the LS-DYNA analysts possessing a comfortable command of the LS-DYNA keywords and options associated with typical Lagrangian analyses. This training class will attempt to provide the analyst with the additional tools and knowledge required to model the class of high energy events.

18th - 19th May 2009, 980.– Euro
Lecturer: Dr. L. Schwer (Schwer Engineering & Consulting Services)

Structural Optimization with GENESIS 1)

This seminar provides an introduction to the GENESIS software and the Design Studio for GENESIS graphical user interface. The individual concepts for optimization (topology, topometry, topography, sizing and shape) and fields of application will be outlined and discussed.

18th - 19th May 2009, 980.– Euro
Lecturer: Dr. M. Liebscher (DYNAmore)

Seminar Information

Venue: Salzburg, Austria;
1) Bad Reichenhall, Germany
Language: English

Reduced conference fees for seminar attendees:

Per pre-/post-conference seminar day a discount of 50.– Euro on the registration fee for the European LS-DYNA con-ference in Salzburg is granted.
More information:
http://www.dynamore.de/conference

Registration and Contact
DYNAmore GmbH
Industriestr. 2
D-70565 Stuttgart, Germany
Tel. +49 (0) 7 11 - 45 96 00 - 0
Fax +49 (0) 7 11 - 45 96 00 - 29
E-mail: cf09@dynamore.de

Additional Information
http://www.dynamore.de/conference

2nd International Conference on Hot Sheet Metal Forming Of High-Performance Steel

June 15-17, **Luleå**, **Sweden**

Abstract deadline, **30th of January, 2009**

The 2nd International Conference on Hot Sheet Metal Forming of High-Performance Steel will be held in Luleå, Sweden, from June 15 to 17, 2009. It is organised by the Swedish-German Centre of Excellence for Hot Sheet Metal Forming of High-Performance Steel, CHS^2. For further information: www.chs2.eu. See also www.ltu.se/tfm/chs2 and www.metform.de. Any questions can be addressed to Lena Olsson, lena.m.olsson@ltu.se.

The purpose of the conference is to bring technical and scientific experts from different countries together, in order to encourage the exchange of knowledge and to establish a forum for discussion of the state-of-the-art and new research results in the field of hot sheet metal forming of high-performance steel. The conference will cover the topics *Material, Process Design*, *Modelling & Simulation* and *Products*.

The second international conference on the topic of hot sheet metal forming of high performance steel will be held in Luleå, Sweden, where the technology of press hardening was invented and industrialized. The demand for hot sheet metal forming technology has steadily increased and, pulled by strong international driving forces such as environment and safety, we are now experiencing and unprecedented growth in automotive applications. The research concerning hot forming processes, micro-structure evolution, deformation, failure, thermal properties and issues such as coatings, heat transfer, high temperature tribology, is intense and a strong research community is under development. This second international conference takes off from where the first in Kassel, Germany (2008) was closed. The scientific and industrial community will be further strengthened and new results and developments from the growing international research programs will be displayed. As the second in a series of international conferences, in the future to be held alternatively every second year in Kassel and Luleå, CHS^2 2009 will highlight multiple aspects from a scientific as well as an industrial viewpoint.

The City of Luleå welcomes all participants to a town surrounded by water, clear skies and around-the-clock light summer nights. The airport is close to the city with hourly connections to Stockholm and the rest of the world. During spare time, visit attractions like Gammelstad Church Town, placed on the UNESCO world heritage list, or take a tour on a boat and experience the Luleå archipelago.

We are looking forward to welcoming you as an author or as a conference participant.
Best regards from The Swedish-German Centre of Excellence for Hot Sheet Metal Forming of High-Performance Steel, CHS^2, Kassel/Luleå

American Society For Engineering Education

Invitation by Scott Williamson s.williamson@asee.org

But act fast! 82% of the exhibit hall floor has been sold. If you're interested in participating, I strongly encourage you to confirm your space ASAP!

Why exhibit at ASEE2009? Location. Location. Location. The ASEE annual conference and exposition provides you with an outstanding opportunity to display your products and services to the largest gathering of engineering educators in the country. ASEE member faculty, department heads and deans are procurement and curriculum decision makers and represent over 40 engineering disciplines. ASEE has reserved more than 19,000 square feet of exhibit space in Austin, a highly visible platform to communicate your brand value proposition to over 3,600 engineering educators and administrators.

Founded in 1893, the American Society for Engineering Education (ASEE) has, for over a century, provided cutting edge leadership and innovative programs and services as the largest and most prestigious membership society for the U.S. engineering education community. Over 90% of all U.S. engineering colleges are ASEE members. The ASEE Annual Conference & Exposition provides a three day forum for over 3,500 leaders in the field, including professors, deans, instructors, and students, to present their research, exchange ideas, and interact with their colleagues and industry counterparts. Join companies like Autodesk, DuPont, National Instruments, MathWorks and Lockheed

Exhibiting at the ASEE annual conference provides you with cost-effective, value-added opportunities to:

- **PROMOTE YOUR BRAND —** **Create brand awareness and build** brand loyalty among a targeted audience of engineering educators and administrators, including over   200 Deans.

- **DRIVE SALES REVENUE** – Gather new leads, build relationships with prospects and cultivate current customers at the largest multi-disciplinary gathering of engineering educators in the U.S.

- **AUGMENT YOUR RECRUITING EFFORTS** – Cultivating relationships with ASEE member deans and faculty is a great way to build a competitive advantage when you're recruiting their best and brightest students.

- **DISPLAY CORPORATE LEADERSHIP** - - Highlight your commitment to promoting innovation and excellence in engineering and technology,

Please visit http://www.asee.org/conferences/annual/2009/Exposition.cfm for complete information. ACT TODAY!

Any questions, please let me know. I look forward to hearing with you!

Thanks and regards, Scott

Scott Williamson
Sales & Marketing Manager
American Society for Engineering Education
1818 N St. NW, Suite 600
Washington DC 20036
ph: 202-331-3549
fax: 202-265-8504

s.williamson@asee.org

ICCT09 1st International Conference on Concrete

Tabriz, IRAN

The 1st International conference on concrete technologies serve the interchange of knowledge and experience in the field of concrete technologies among different research groups connected with this material and coming from all over the world.

The conference is organized by The Iranian National Retrofiting Center, Tabriz, Iran and will be organized in close contact with the Chair of Structural Design at Dresden Univesity of Technology.

Sponsorship for the conference is Peshahvar Technical University Pakistan.

The conference venue is the Petroshimi Cultural Complex, located in Tabriz, Iran.

Among the many conference topics are:

- High Performance Concrete
- Concrete in Fire
- Sustainability and Durability
- Concrete Construction in Architecture
- Analytical Models and Computer Simulation
- Ductile Fibre Reinforced Cementitious Composites
- Rehabilitation and Retrofitting of Concrete Structures
- Assessment, Monitoring and Environmental Aspect
- Concrete Materials and Chemical Admixtures
- Standard And Specifications

Excerpt from Conference Format...

- The official language of the conference is English and all papers must be submitted in English. However, the presentations are possible to be in the Persian language.
- The special topics will be grouped in parallel sessions to attract specialists and interested persons in neighboring fields.
- There will be invited and welcome papers from all countries. The conference also will attract local attendees to participate and present papers and give an insight into the current level of the concrete in Iran.

Call for Papers:
  February 01, 2009
Abstract Submission Deadline:
  May 15, 2009
First Announcement for Abstracts:
    May 20, 2009
Full paper Submission Deadline:
    Aug. 15, 2009
Final Announcement for full
  papers: Sept. 20, 2009
Registration deadline:
    Sept 20, 2009

Office Contact Locations:
Asia: Tabriz Iran
      asia@icct.ir
Europe: Dresden, Germany
      Europe@icct.ir

World Wide Conferences & Events

04/03-04 USA   [American Society for Engineering Education ASEE Spring 2009 Northeast Conference](#)

04/21-22 USA   [MSC.Software 2009 Virtual Product Development Conference](#)

05/12-13 Germany   [MSC.Software 2009 Virtual Product Development Conference](#)

05/14-15 Austria   [7th European LS-DYNA Conference](#)

05/24-27 Korea   [Computational Technologies in the research of Concrete and Reinforced Concrete Structures](#)

05/25-27 Greece   [5th Int'l Conference on Fluid Structure Interaction](#)

06/8-10 Portugal   [11th International Conference on Optimum Design of Structures and Materials Engineering](#)

06/15-17 Sweden   [2nd International Conference on Hot Sheet Metal Forming Of High-Performance Steel](#)

06/16-19 Greece   [NAFEMS World Congress](#)

06/23-24 USA   [PLM Summit North America 2008](#)

07/16-19 USA   [10th US National Congress on Computational Mechanics](#)

09/09-11 Greece   [3rd ANSA & μETA Int'l Conf](#)

11/14/-20 USA   [SC2009](#)

2010 USA: June 8-10th - Hosted by Livermore Software Technology Corp.
The 10th International LS-DYNA® Users Conference
The Hyatt Regency, Dearborn,

Mark Greer
2516 W. Country Bend Drive • South Jordan, UT 84095 • (801) 254-9354 •
mlgreer@msn.com

MANAGEMENT: Product Marketing, Business Development, Partner Marketing, Pre-Sales

PROFILE
Talented and accomplished Marketing professional with over 16 years of experience directing departments, programs, and projects. Consistent record of achieving dramatic increases in revenue. Expertise in facilitating business growth, directing product development and launches, and supporting corporate sales efforts. Adept at managing effective teams.

Product Marketing • Strategic Planning • Brand Management • Process Improvement
Budget Administration • Pricing • Distribution • Promotions • Problem Solving • Consultative Sales
Competitive Analysis • Product Positioning • Negotiations • Alliance/Partner Marketing • MarCOM

PROFESSIONAL EXPERIENCE
Linux Networx, Bluffdale, UT   2007 - 2008
Corporate Marketing / MarCOM Manager
- Orchestrated and implemented effective marketing promotions to drive revenue through product education, positioning and awareness campaigns, including user conferences, trade shows, seminars, opt-in email campaigns, webinars and customer focus group meetings.
- Served as marketing liaison and sales support with the Sales team, for marketing program planning and execution, organization and development of marketing materials (e.g. promotional activities, presentations, trade show events). Provided support through proposal language, regional campaigns and lead management communications.
- Functioned as brand champion ensuring brand was correctly managed and utilized by internal and external stakeholders through effective development and distribution of branding tools, policies and communications.
- Managed lead generation, distribution and management reports.
- Liaison between company and outside agencies, partners, outside vendors and media.

Linux Networx, Bluffdale, UT   2004 - 2006
Alliance / Partner Marketing Manager
Coordinated partnership marketing efforts at global level and led market research efforts.

- Recruited, developed and managed partnerships and joint marketing efforts with ISVs to enhance revenue growth by marketing ISV software apps with Linux-based cluster systems.
- Analyzed partner solution offerings and developed relationships with application vendors to achieve business goals. Investigated and resolved technical issues with partner applications.
- Worked with partners to develop, position, and market value-added solutions for product lines.
- Communicated with field sales to coordinate joint sales efforts and business development opportunities with vendor partners.
- Developed partner value propositions for collateral, promotional material, and sales programs.
- **Played key role in company's ability to penetrate commercial market with new product offerings**. Oversaw market research and configuration development for turnkey, desk-side cluster optimized for finite element analysis (FEA) software applications.
- Assisted with creation of reseller agreement used to recruit application partners and resellers.

Novell, Inc., Provo, UT   1999 - 2003
Product Marketing Manager – Novell Directory Services (NDS)

Managed marketing functions for company's highest-selling products, valued at $45 million.
- Carried out complete project management of products, from initial launch planning through ongoing promotional and marketing efforts.
- **Grew Novell Identity Manager (Novell DirXML) from launch to $25 million in sales, exceeding revenue projects by 34% and becoming market leader**. Developed messaging, managed analyst relations, and created channel messaging.
- **Increased sales 37%** for Novell eDirectory product, by creating aggressive Internet-based promotional offer [targeting SUN and Microsoft directory users] that quadrupled license revenue and received extensive media attention.
- Prepared training materials, oversaw pricing and packaging, performed staff training, developed collateral and web content, and defined positioning strategies.
- **Improved brand recognition 32%** as measured through outside analysts and customer surveys. Supervised team of six for two major launch initiatives.

NCR, Inc., Dayton, OH   1997 - 1999
Pre-Sales Consultant, Retail Data Warehousing Practice
- Carried out consultative technical sales / sales support of data mining, business intelligence, and scalable data warehouse solutions. Delivered presentations and demonstrations.
- Supported sales for Western region, including 25 sales representatives and accounts such as Sears, Meijer, Home Depot, Wal-Mart, and other nationally recognized retail accounts.
- Prepared RFP responses, proof-of-concept documentation, competitive analyses, and other various pre-sales activities to drive the sales process.

- **Managed projects from business discovery to deployment.** Performed account planning and strategic analyses, customer service, and training.
- Oversaw retail data mining solution support, including affinity and market basket analyses, customer segmentation, site selection, and other functions.
- **Played major role in growing data mining practice from initial launch to viable business unit that delivered several million dollars in new business after second year.**
- **Improved sales process, solution development, and customer satisfaction.** Established retail data mining Community of Interest and associated Intranet site to educate sales and pre-sales staff on data mining technology. Arranged seminars with vendor representatives.
- **Awarded multi-million dollar data mining/business intelligence agreement from Meijer.**

Unisys, Inc., Salt Lake City, UT   1995 – 1997

Partner Marketing Manager – Business Intelligence / DWH Solution Division
- Established and managed new business unit for company and initiated first relationships with data warehouse/business intelligence software partners, such as Business Objects, Cognos, and SAS.
- Determined market and customer requirements and carried out complete product life cycle management, including development, positioning, marketing, vendor selection, contract negotiations, business case development, pricing, life cycle planning, and knowledge transfer.
- **Implemented data mining sales program with projected six-month ROI of $4 million.**
- **Delivered $100 million in sales leads, with 89% conversion rate,** for company. Arranged joint, 10-city seminar with Red Brick on business intelligence and data mining.

PREVIOUS EMPLOYMENT
Channel Marketing Manager, Century Software, Murray, UT 1994 – 1995
Regional Account Manager, Spire Technologies, Orem, UT   1993 - 1993
Marketing Manager, ZZ Software Systems, Orem, UT   1991 - 1993

EDUCATION
MBA, Finance emphasis, National University, San Diego, CA (1990)
BS in Business Management, Marketing emphasis, Brigham Young University, Provo, UT (1987)

PROFESSIONAL DEVELOPMENT
Project Mgmt., Mgmt., Marketing, Sales Support, RDBMS Modeling, Teradata Factory, SQL

ADDITIONAL INFORMATION
Computers: MS Office, PowerPoint, Project, Adobe Contribute CS3, SQL, MessageReach