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SUN MICROSYSTEMS

The Toy Show

UC BERKELEY

9th

US National Congress

on Computational Mechanics

MICROSOFT

Simulation with

LSTC's LS-DYNA

Live HPC Webcast

FEA INFORMATION RESOURCE MAGAZINE

Announcements:

LS-DYNA Keyword Version 971 Volume 1 and 2
available for downloading on LSTC Website.

May 30, 2007: Simulation with LSTC's LS-DYNA - 11:00 AM PDT
Live HPC Webcast:

Reducing the Complexity of HPC for Simulations:
Windows® Compute Cluster Server 2003 Powers Multi-FieldProduct
Learn how CCS provides a powerful platform for HPC, while LS-DYNA® provides a flexible simulation solution for finite element analysis. **Register today**

June 14-15 "2nd ANSA & μETA International Congress"
Will be held in Halkidiki, Greece.

We (Marsha Victory and Art Shapiro) will be attending the 6th European LS-DYNA User's Conference in Sweden. If you are attending please feel free to say hello and give us any ideas for the news or websites.

Sincerely,

Art Shapiro
art@feainformation.com

Marsha J. Victory
mv@feainformation.com

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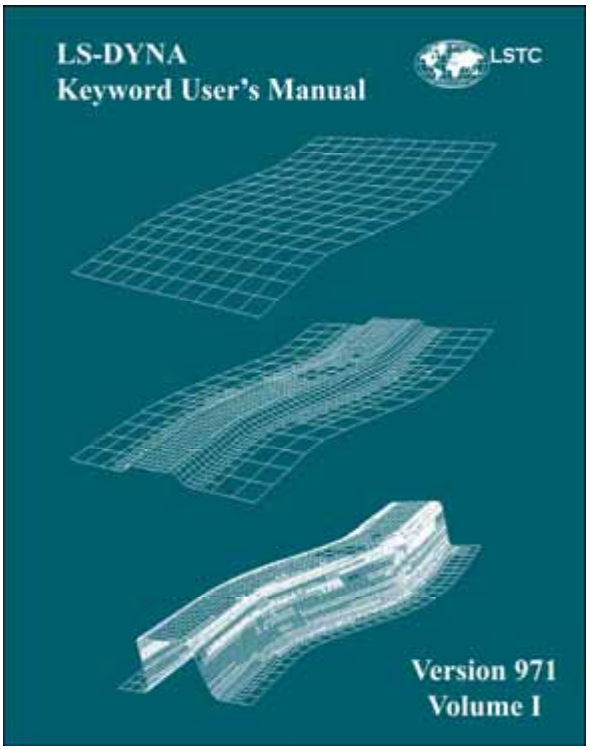
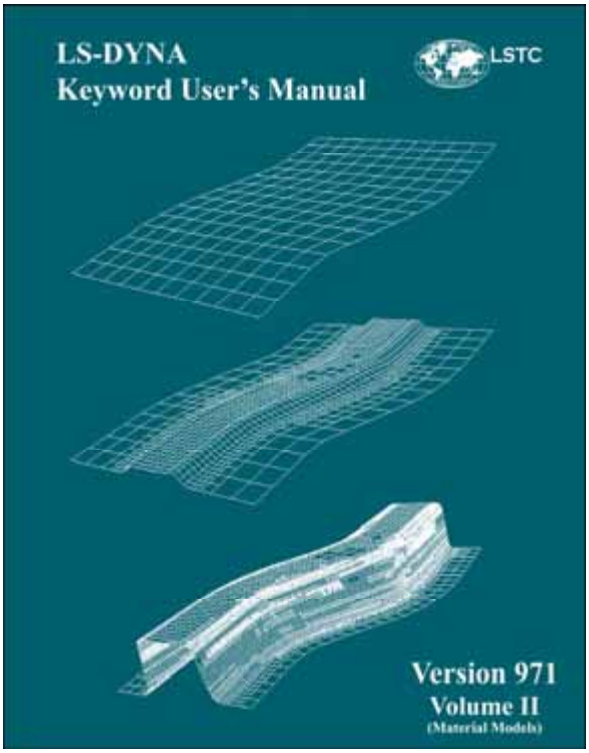
LS-DYNA Keyword User's Manual Version 971
sales@lstc.com

All the new features included in LS-DYNA Version 971 are documented in this 2 volume set. Over 600 pages more have been added since the 970 manual was released. Currently, a single PDF file containing both volumes and complete bookmarks can be download from the LSTC ftp site.(17MB) The hardcopy version of the manual will be available for purchase, check the LSTC website www.lstc.com for details.





The Toy Show

Reprinted: Featured at Sun Microsystems By Leslie T. O'Neill

May 14, 2007 -- As five Taiko drummers pounded out a beat, hundreds of Java devotees crowded into James Gosling's annual Toy Show on May 11 to see 12 new implementations of Java technology.

Gosling appeared just as excited by the technology as the winning engineers were to be sharing the stage with the father of Java. Gosling walked through the demos with the engineers, and by the end of the Toy Show, he had been joined on stage by robots, a helicopter, a submarine, and several other groundbreaking applications--all running 100 percent Java.

Gosling declared that the devices that can be built with Java are "pretty much endless." He showed pictures of an ATM that he called "a big bag of Java code wrapped in steel" and a Hobart meat scale, which performs instant pricing updates with a Java VM and a Web browser.

"Be inspired! A lot of really interesting stuff happens when these Java implementations touch each other," said Gosling.

Twelve "Toys"

This year's Toy Show made one thing clear: Almost anything can be accomplished in Java. In order of appearance, the demos included:

Project D-Light: a Sun Studio plug-in that leverages the DTrace application performance analysis tool

- Sun Grid Compute Utility: a new NetBeans plug-in that allows users to work with Sun Grid directly from NetBeans
- NetBeans IDE 6.0: the better, faster editor includes a new local file history
- Ricoh network printer: a customizable display powered by Java
- Ubiquitech Virtual Document Management System (VDMS): a printer display appears on Bluetooth-enabled mobile devices
- Blu-ray: uses Java to add interactive content to DVDs
- Cineshot from Cinegistics: Java Swing application to capture real-time video input to analyze on a laptop

- Project Wonderland: a virtual workspace that allows real-time collaboration on native-x applications
- RSMedia robots: Java APIs control all body movements
- ABB industrial robot: the first industrial robot controlled by Java is also the world's fastest industrial robot
- Project SONIA: autonomous underwater vehicle with Java-developed software components
- Perrone Robotics helicopter: X86 processor runs Solaris 10 and Java to build 3D terrain maps

Revelling in Robots

All the demos were met with applause and hoots of approval, but none elicited as much glee as three grey and orange robots from RSMedia, each about 18 inches tall, that danced onstage to Gloria Gaynor's "I Will Survive." All the body movements were programmed with Java APIs.

Gosling was quick to point out the practical potential of these toys. By adding a SunSpot on the robot's back, for instance, it could perform RF networking, sensor input, and more.

In the next demo, Greg Bollella, a Sun Distinguished Engineer, controlled the ABB industrial robot with off-the-shelf Solaris and Java. In a game of mumbly peg, the robot stabbed around the digits of an empty glove. Bollella declared the robot safe enough to risk his own hand in the game, if only the lawyers allowed it.

Paul Perrone, CEO of Perrone Robotics, demonstrated a small, unmanned helicopter flown on wires above the stage. Perrone and Gosling laid on the stage and were mapped by the copter's laser. "This is 1/100th the cost of competing technology, and we can do this because we have Java RTS," explained Perrone.

Java for Multimedia

The Toy Show also demonstrated how Java technology can create stellar multimedia experiences. Danny Kaye, executive vice president of technology strategy at 20th Century Fox, showed what Java applications can do on Blu-ray DVDs, such as creating an online trivia game synched to movie scenes.
Using the nautical adventure "Master and Commander," Kaye demonstrated a map function written in Java code that shows the viewer where on the planet the ship is during the movie. A trivia track could also be added to teach viewers more about the world in which the movie is set. "One could easily imagine an entire wikipedia just for 'Master and Commander,'" said Gosling.

For Sun Developer Paul Byrne's walkthrough of the virtual collaborative environment called Project Wonderland, he used an avatar modeled after Gosling, saying, "We can look at the world through James's glasses!" As the virtual Gosling moved through Project Wonderland, he was able to approach another avatar and start a conversation with realistic audio as well as use desktop applications running in the virtual space.

Project Wonderland uses the Project Darkstar server as the back end and an open source Java 3D-based graphics engine to generate the lifelike virtual environments. "People all over the world can collaborate in the same space," said Gosling.

As the Toy Show concluded, John Gage, Sun chief researcher and director of the Science Office, called Gosling back to the stage to issue a challenge. Inspired by Project Wonderland as well as the robotics, Gage asked if developers could use

Java to build a 3D environment that would allow users to fly in ways not possible in the physical world--and build it by next year's JavaOne. Gosling laughed and said, "There's a lot of fun to be had."

For more information on Java, go to java.sun.com.

Technology writer Leslie T. O'Neill covers Sun technology and was the Test Center Managing Editor and Special Projects Editor at InfoWorld magazine.

About Sun:

By investing in research and development Sun creates products and services that address the complex issues that customers face today, including increasing demands for network access, bandwidth and storage being driven by explosive growth in network participation and sharing. We innovate at all levels of the system and we partner with market leaders to provide value and choice for our customers.

Sun's network computing infrastructure solutions are used in a wide range of industries including technical/scientific, business, engineering, telecommunications, financial services, manufacturing, retail, government, life sciences, media and entertainment, transportation, energy/utilities and healthcare.

Invitation from T.I. Zohdi, Congress Chair

9th US National Congress on Computational Mechanics (USNCCM9) San Francisco, California, USA

Website and Complete Information

Background

From their inception in 1991, the biennial congresses of the U.S. Association for Computational Mechanics have become major scientific events, drawing computational engineers and scientists worldwide from government, academia, and industry. The ninth U.S. National Congress on Computational Mechanics (USNCCM IX), hosted by the University of California, Berkeley, will feature the latest developments in all aspects of computational mechanics, and will broaden the definition of the discipline to include many other computation oriented areas in engineering and sciences. From applications in nanotechnology and bioengineering, to recent advances in numerical methods and high-performance computing, the technical program will reflect the Congress theme - ''Interdisciplinary Computation''. In addition to plenary lectures and minisymposia that highlight the latest trends in computational mechanics, pre- and post-conference short courses addressing advances in multiscale and multiphysics methods, as well as other topics will be held. Numerous vendor exhibits from the Bay Area and national companies are also planned.

Among the Many Accepted Minisymposia

Failure Mechanisms Under Dynamic Loading

Organizers: David Benson and Rebecca Brannon

Accomplishments and challenges in verification and validation

Organizers: Len Schwer, Bill Oberkampf and Wayne Chen

Advances and Applications of Meshfree and Extended Finite Element Methods

Organizers: Cheng-Tang Wu, Yong Guo, Hui-Ping Wang and Pablo Zavattieri

Numerical Modeling and Simulation on Nanoscale Materials and Devices

Organizers: Ted Belytschko, Shaoping Xiao and Harold Park

Meshfree and Generalized/Extended Finite Element Methods

Organizers

J. S. Chen, Ivo Babuska,
Ted Belytschko, Wing Kam Liu,
Hirohisa Noguchi and Sang-Ho Lee

Congress Chairs

Robert L. Taylor (Honorary)

The University of California, Berkeley

P. Papadopoulos

The University of California, Berkeley

T. I. Zohdi

The University of California, Berkeley

Local Organizing Committee

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A. Lew	Stanford
S. Li	UC Berkeley
M. Mofrad	UC Berkeley
P. Pinsky	Stanford
C. Taylor	Stanford
L. Schwer	Schwer Engineering & Consulting Services

Plenary Speakers

Douglas Arnold

University of Minnesota

Yannis Kevrekidis

Princeton University

Pierre Ladeveze

École Normale Supérieure de Cachan

Mary Wheeler

University of Texas at Austin

Kaspar Willam

University of Colorado at Boulder

Peter Wriggers

Universität Hannover

Important Dates

June 1, 2007

Deadline for early registration (EXTENDED!)

July 15, 2007

Deadline for regular registration

July 23-26, 2007

USNCCM IX

Technical Program

July 22 & 26, 2007

Pre- and post-conference short courses

The Ninth United States National Congress on Computational Mechanics

6th German LS-DYNA Forum – October 11-12, 2007

by: A. Giaccana, FEA Information, Inc., Technical Writer

Following the success of the 2006 LS-DYNA forum, the 6th will be held in Frankenthal, Germany on October 11-12, 2007. The conference language will be German and English.

The conference attendees include engineers, professors, students, consulting and engineering services, hardware and software manufacturers, and industry individuals interested in many applications of LS-DYNA.

Many development engineers from LSTC are attending and presenting papers. This brings to this Forum an ideal meeting place for users of LS-DYNA, LS-PrePost and LS-OPT to share ideas and questions. Among the attendees from LSTC will be Arthur Shapiro, Nielen Stander, Philip Ho, Marsha Victory.

You will be updated on LS-DYNA New Developments by Key Note Speaker Dr. John O. Hallquist, LSTC.

Among the many keynote speaker presentations you will find:

- Test and Simulation of Adhesive Bonding, Prof. Michael Schlimmer (University Kassel)
- Modeling of Adhesive Bonding in Crash Analysis, Dr. Markus Feucht (DaimlerChrysler)
- Development and Verification of CAE Processes, Dr. Bernd Fachbach (Magna Steyr Fahrzeugtechnik)
- Methods and Processes in Respect of Cost Reduction, Norbert Schulte-Frankenfeld (Wilhelm Karmann)
- Advanced Airbag Modeling, Andreas Hirth (DaimlerChrysler)
- Development of Occupant Restraint Systems, Axel Heym (Takata-Petri)
- Aspects of Metal Forming, Arnulf Lipp (BMW)
- Deep Drawing Simulation of Steel Materials, Dr. Lutz Kessler (ThyssenKrupp Steel)

You are all encouraged to come join the LSDYNA Forum as a participant, speaker, attendee, exhibitor or sponsor. The knowledge you will gain and new people you will meet make this forum a must to attend.

Visit the website

6th German LS-DYNA Forum

Invitation from Chang-Koon Choi, Chair, ASEM'08

The 4th International Conference on Advances in

Structural Engeering and Mechanics(AWAS'08)

28-30 May, 2008 in Jeju, Korea

Organized by

Korea Advanced Institute of Science & Technology(KAIST)

Korea Association of Computational Mechanics(KACM)

Dear Colleagues:

After successes of the first three International conference on Advances in Structural Engineering and Mechanics, the 4th conference(ASEM'08) will be held on 28-30 May 2008 in the island of Jeju, Korea.

It is with great pleasure for me to invite you to attend this interesting event.

The deadline for submission of abstracts is the end January 2008.

Also, you are invited to organize a session in the area of your interest at ASEM'08.

For more information, please visit; http://asem08.kaist.ac.kr

For planning purpose, if you are interested in organizing a session and/or in presenting a paper at ASEM'08, please let us know by return mail: asem08@kaist.ac.kr

Looking forward to hearing from you and meeting you next year in Jeju Island, Korea.

Sincerely yours,

Chang-Koon Choi - Chair, ASEM'08

****

c/o TP Conference Consultants

P.O. Box 33, Yuseong

Daejeon 305-600, Korea

Fax:(+82-42)869-8450

Email:asem08@kaist.ac.kr

http://asem08.kaist.ac.kr

Invitation From Isabelle Girard, VA Marketing Specialist – ESI

isabelle.girard@esi-group.com

ESI Group's announces its 2007 European Users Conference on Noise and Vibration Simulation - June 12-13, 2007 in Cologne, Germany

ESI Group's Vibro-Acoustic Users Conference (VAUC 2007) will be held at the Hilton Hotel on June 12-13, 2007 in Cologne, Germany. This second vibro-acoustic users' conference represents a unique opportunity for technical exchange among vibro-acoustic practitioners, researchers and application experts. During this 2-day event, attendees will have the opportunity to hear papers from major industry professionals and will hear about the latest in vibro-acoustic software and simulation methods.

Noise and vibration quality is a critical factor in the design of a wide range of products, from automobiles and aircraft to consumer appliances. Vibro-Acoustic problems are frequently left until prototypes are built and tested, late in the design process, and after significant costs have been expended. The VAUC 2007 is your chance to see how virtual prototyping solutions reduce the need for costly laboratory testing, speed up the product development process and minimize the production cost of noise and vibration control materials and treatments. Among the speakers, the VAUC 2007 will feature vibro-acoustic professionals from a wide cross-section of industries including Volkswagen AG, Faurecia, Alcatel Alenia Space Italia S.p.a, CNES, and many others.

Not only will vibro-acoustic users gather to hear and share industrial experiences, participants will also learn on the second day about the latest VA One software developments by means of a "hands-on" training session supervised by the ESI VA Support Group. VA One is the evolution of the AutoSEA2 and RAYON software, and combines state of the art FEA (Finite Element Analysis), BEM (Boundary Elements Method) and SEA (Statistical Energy Analysis) solvers in one easy-to-use environment for vibro-acoustic analysis and design.

The VAUC 2007 is the event you must attend this year to learn, share and discover new methods for vibro-acoustic simulation analysis and design.

Don't waste time, register now

We look forward to seeing you in Cologne, Germany on June 12-13, 2007.

All details can be found at http://www.esi-group.com/VAUC2007/index_html
Or contact Isabelle Girard at isabelle.girard@esi-group.com.

Invitation From Anne Zhao

China International Simulation Industry Exhibition & Conference 2007

ISEC2007 - December 5-7, 2007 - Shanghai China,

anne.zhao@kingleap.com

Excerpt – full information can be read at www.chinaisec.com

ISEC2007 ORGANISED BY:

- Shanghai Association for Science and Technology (SAST)
- Shanghai Association for System Simulation
- Hope Convention & Exhibition Organization
- Shanghai KingLeap Exhibition Service Co., Ltd

SUPORTED BY:

- China Association for System Simulation Journal of System Simulation

ISEC2007 is dedicated to simulation industry and virtual reality. ISEC2007 offers a world of opportunity with visitors from different countries showcasing products and services from simulation industry and virtual reality leaders..

The Conference is dedicated to the exchange of information and ideas about the trends and development of the simulation industry in China, and will provide a platform for discussions among service providers, suppliers, users and policy makers. It will act as a catalyst for providers and consumers on new concepts for global simulation industries.

We have launched ISEC2007 to meet the needs of firms in this growing sector. It's the perfect platform for service providers, suppliers looking for opportunities to meet and do business with users and policy makers. If you are involved in:

- Simulation Consultancy/Project Management
- Distance Learning/e-Learning
- Driving Training
- Electronics Training/Synthetic Environments
- Maintenance & Diagnostics
- Modelling and Simulation
- Multimedia/Internet Services
- Physical Training Equipment
- Training Organization/Courseware/Classroom Aids
- Instructional Aids
- Visual Systems/Image Generation/Effects Simulation
- Weapon Training/Systems/Equipment
- Rail

CONTACT DETAILS:

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www.kingleap.com

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NEC and Microsoft Advance Enterprise Availability on Windows Server 2008

Press Release - Santa Clara, Calif. - May 16, 2007

NEC-Microsoft Enterprise Alliance Demonstrates Dynamic Partitioning Hot Replace Capability at WinHEC 2007; Companies Continue to Generate Greater Reliability, Availability and Serviceability for Mission Critical Systems

- NEC Corporation of America, a premier provider of IT, network and identity management solutions, today announced that the advanced architecture of the NEC Express5800/1320Xf server will be utilized for the world's first demonstration of an autonomic "hot replace" function of the dynamic hardware partitioning capabilities of Windows Server 2008 (Longhorn). The demonstration is an example of how businesses can now affordably experience mainframe-class reliability, availability and serviceability.

"The increased reliability and availability that dynamic partitioning hot replace provides is crucial to mission critical applications such as those we deliver to our customers," said Bill Michael, vice president of Information Technology, Online Resources Corporation. "With more than nine million of consumers accessing our systems day and night to process financial transactions, we must have our Intel Itanium-based servers from NEC available and performing around the clock."

The increasing demand for businesses, regardless of size, to have data centers and applications that are accessible and able to deliver services around the clock means there is a greater need for servers with mainframe levels of availability.

"The joint efforts of NEC and Microsoft to deliver high-end capabilities such as dynamic partitioning to the world of Windows servers means that businesses can have mainframe-class reliability, availability and serviceability without the high cost," said Barb Goldworm, president and chief analyst, Focus Consulting. "Leveraging these leading-edge technologies brings a cost-effective solution to an age-old problem."

To help IT professionals improve the availability, reliability and performance of their infrastructure, Windows Server 2008 includes simplified failover clustering, dynamic partitioning and auto-tuning networking features to automatically manage system resources and help ensure that customers have uninterrupted and optimized access to their company network.

The dynamic hardware partitioning functionality available in Windows Server 2008, currently available as a public beta, provides the ability to actively add memory, processor and I/O devices while the system is running for enhanced scalability. At the same time, the functionality also improves reliability, availability and serviceability (RAS) by allowing "hot replace" on systems to avoid scheduled maintenance downtime.

"Windows Server 2008 will help organizations increase the security, flexibility and manageability of their server infrastructure while saving time and reducing costs," said Bill Laing, general manager, Windows Server Division at Microsoft Corp. "Windows Server 2008 for Itanium-based systems, along with SQL Server 2005, will offer customers the highest levels of performance, reliability and scalability for mission-critical applications. Our close collaboration with NEC

has been a crucial component in the development of next-generation technologies such as dynamic partitioning in Microsoft Windows Server 2008."

Designed as NEC's next-generation mainframe architecture, processing and I/O modules of the NEC Express5800/1000 series of servers can be partitioned at the hardware level to create multiple physically-isolated servers. Through this architecture, the NEC Express5800/1000 servers have the unique capability of providing hardware-assisted memory state copy of a failing cell. This assisted "memory copy" capability accelerates the hot replace function of dynamic partitioning within Microsoft Windows Server 2008.

A Focus Consulting analyst brief titled "Dynamic Hardware Partitioning - NEC, Microsoft, Intel" can be found at www.necam.com/servers/files/NEC_Brief_DynamicHardwarePartitioning.pdf.

About NEC Corporation of America

NEC Corporation of America is a leading technology provider of network, IT and identity management solutions. Headquartered in Irving, Texas, NEC Corporation of America is the North America subsidiary of NEC Corporation (NASDAQ: NIPNY), a Global 200 company founded in 1899, which delivers technology and professional services ranging from server and storage technologies, virtualization and digital cinema solutions to biometric security, optical network, radio communications and IP voice and data systems. NEC Corporation of America serves carrier, SMB and large enterprise clients across multiple vertical industries. For more information, please visit www.necam.com.

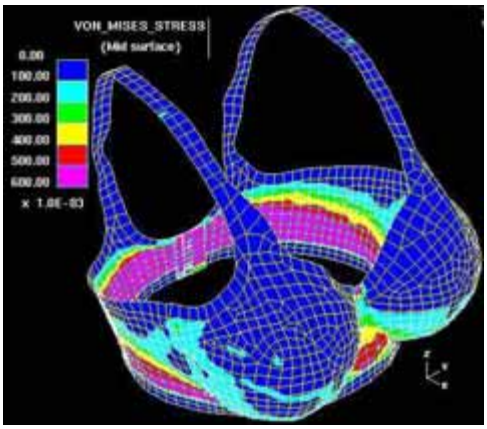
Among the many ISV applications that are available on NEC HPC platforms.
ANSYS - LS-DYNA - MSC.Nastran

Simulation with LSTC's LS-DYNA - May 30, 2007 11:00 AM PDT
Live HPC Webcast: Register today
Reducing the Complexity of HPC for Simulations:
Windows® Compute Cluster Server 2003 Powers Multi-FieldProduct
Learn how CCS provides a powerful platform for HPC, while LS-DYNA® provides a flexible simulation solution for finite element analysis.

LS-DYNA Featured AVI
Clothing Manufacturing

Complete AVI's can be viewed at:

www.feainformation.com – top bar link "AVI Lib"



AVI Library #61 539KB

In this particular case the consulting engineers, Ove Arup & Partners' Advanced Technology Group used dynamic non-linear finite element techniques to analyze the bra's structural performance. A computational representation of the bra on a body was created by scanning the geometry of the model, Loen, who was featured in the program. The bra was then constructed using techniques usually associated with the modeling of airbags and seatbelts in cars. This enabled the non-linearity of the bra material, contact interaction with the body and large displacements to be represented. The performance of the bra was then analyzed by applying vertical accelerations to simulate a person jogging lightly or walking briskly. The analysis displayed fluctuating stresses in the bra cups and straps, varying with the walking pattern, and a higher constant stress around the base band where the bra was pulled tight onto the body.

Yahoo Group Yammerings

Questions / responses, from postings to the LS-DYNA Yahoo Group.

Note: LS-DYNA Yahoo Group is neither owned nor operated by LSTC, and LSTC has no control over the content.

Questions

1. **Regarding Quasi Linear Viscoelastic Mat176?**
2. **Acceleration and velocity curves?**

1. Questions Regarding Quasi Linear Viscoelastic Mat176?

I am confused that the LS-DYNA formulation for the QLV material model asks for a Load Curve that defines the relaxation function in shear. It seems that using a Load Curve for the relaxation function in tension or compression would be much more common and therefore more useful than shear relaxation function. Fung, describing his QLV model in his book, refers to a cylindrical specimen subjected to a tensile load. Is the LS-DYNA load curve definition supposed to be a tensile relaxation function instead of a shear one, and if not, are there any plans to alter this material model to use a compression load curve?

Reply by Suri Bala

When the relaxation behavior is fitted using a Prony Series, the ratio of Gi/G0 is usually considered and subsequently scaled by G0. This is frequently called the relaxation function. However, when G(t) is input directly, as in LS-DYNA, its common to refer to the curve as the shear modulus relaxation curve.

In MAT_176, you have the viscous stress coming from the LC1 and the instantaneous elastic stress coming from LC2. LC1 can include the relaxation modulus [Sigma(t)/initial strain] from a tensile or compressive curve by scaling the curve by a factor of 1/3 for a incompressible material.

2. Question: Acceleration and velocity curves?

I have post processed a LS_DYNA simulation. Using the NODOUT file, I plotted:

(1) the nodal accelerations directly
(2) the nodal velocities and then differentiated the curves to obtain the accelerations

I noted that the acceleration curves from (1) are very different from those obtained by differentiating the velocities (2). The accelerations (1) have more spikes and the maximum acceleration is larger than in the differentiated results (2).

Are the NODOUT accelerations reliable, or is it better to differentiate the velocities?

Reply by Len Schwer

LS-DYNA computes accelerations/velocities every time step, while the NODOUT file is typically output at a larger time interval. Thus differentiating the NODOUT velocities will not reproduce the NODOUT accelerations.

About The LS-DYNA Yahoo Group

- The archives contains a wealth of information that can be helpful to any LS-DYNA user.
- There are over 2240 subscribers from all over the world, and grows by a hundred new subscribers ever few months. The group currently averages about 300 message per month, i.e. about 10 message per day.

How To Subscribe:

- Send an email request to **LS-DYNA-subscribe@yahoogroups.com**
- Visit the Yahoo Groups web site http://groups.yahoo.com

How To Benefit from the Group

- Review the archives when you are seeking help on any topic related to LS-DYNA. NOTE: Questions and responses may have been edited for clarity & brevity.
- Generally, the quickest/best responses are to those questions posed with the most specifics.
- General questions such as "How do I use XXX feature?" either go unanswered, or are answered by Jim Kennedy with links to appropriate references in the growing LS-DYNA related literature, e.g. see the archive of LS-DYNA Conference proceedings at www.dynalook.com

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Len Schwer
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June carhs.training gmbh

Managing Director: Rainer Hoffmann
rainer.Hoffmann@carhs.de

carhs.training Seminars and Events in Automotive Safety in summer 2007

All seminars are available as in-house seminars in English!

2007

12.-13. June	Seminar+Workshop Pedestrian Protection in Bergisch-Gladbach (in German)	different trainers in cooperation with BGS
14. June	Vehicle homologation in Alzenau (in German)	Wolfgang Wister, Magna-Steyr
19.-20. June	Simulation of plastics and foam for crash simulation in Alzenau (in German)	Paul du Bois
21.-22. June	Objective measurement of seating comfort in Alzenau (in German)	Steffen Adler, Dr. Arnd Friedrichs, LWS Consulting
9.-10.July	Design of Experiments in Alzenau (in German)	Dr. Karl Siebertz, Ford
27.-28.June	Introduction to passive safety of vehicles in München (in German)	Dr. Alois Mauthofer, carhs.communication gmbh
25.-26. Sept.	Grazer SafetyUpDate in Graz, Austria - **New Date!** (in German and English)	different trainers in cooperation with VSI/Prof. Steffan

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LS-PrePost® Online Documentation News

14-May
Added Recent file list to File Menu (LS-PrePost 2.2 only)

01-May
Started work on LS-PrePost 2.2

23-Apr
Added an updated User Guide and set of Examples for the BlockM Interface

19-Mar
Tutorial 17 added to online documentation (Intro to MetalForming Interface)

10-Mar
Added Record Orient option to Toggle Menu to suppress writing of orientation commands to Command File

LS-PrePost® was designed to provide the following core functionalities:

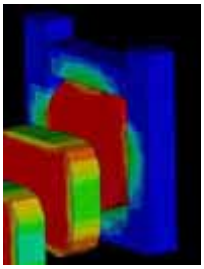
- Full LS-DYNA® keyword support
- LS-DYNA model visualization
- LS-DYNA model creation and editing
- Advanced post-processing

LS-PrePost's main post-processing capabilities include states result animation, fringe component plotting, and XY history plotting.

LS-PrePost is also capable of importing and exporting data in a number of common formats. The figure on the right illustrates a sampling of those that a typical user might find most useful.

LSTC California & Michigan Training Classes

June – July - August



A complete list of dates can be found on the LSTC website

June		
05-08	MI	Introduction to LS-DYNA
12-13	CA	Contact
14-15	CA	Composite Materials
18-19	CA	Material Modeling Using User Defined Options
26-29	CA	Advanced – Impact Analysis
July		
11-13	CA	Ale/Eulerian & Fluid/Structure Interaction
30-Aug 02	CA	Introduction to LS-DYNA
Sept		
06-07	MI	Advanced Options
11-14	MI	Introduction to LS-DYNA
18-21	CA	Advanced – Impact Analysis
24-25	CA	Blast & Penetration

For Class Details:
www.lstc.com

Participant Benchmarks On TopCrunch.

TopCrunch.org For Complete Vendor Submitted Benchmarks

As of May 7, 2007, all cores for each processor must be fully utilized.

Benchmarks of multi-core processors using only a single core per processor will no longer be posted.

The TopCrunch project was initiated to track the aggregate performance trends of high performance computer systems and engineering software. Instead of using a synthetic benchmark, actual engineering software applications are used with real data and are run on high performance computer systems. The data are available for download in the form of data files for our current software suite.
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With time, we expect to track the evolution of delivered performance as a function of enhancements in both software algorithms and hardware. The results of the benchmarks are available as submitted, and may be searched by data, code name, and year. Summaries and overall rankings are posted twice per year following the precedent set by TOP500

2007 Worldwide Events

LS-DYNA Events

DATE	Country	Conference	Hosted By:
May 29-30	Sweden	6th European LS-DYNA Conference	ERAB
Oct 11-12	Germany	LS-DYNA Users Meeting, hosted	DYNA*more*
Oct 30-31	Japan	Japan LS-DYNA Users Conference	JRI-SOL

The 8th International Users Conference 2008 will again be held in Dearborn, MI, USA – Conference Website

Events

DATE	Country	Conference
June 01-08	UK	Int'l Conferenc on Computational Ballistics
June 12-13	German	VAUC 2007 – Vibro-Acoustic User Conference
July 02-04	Russia	Computational Methods and Experimental Measurements
July 23-26	USA	Ninth US National Congress on Computational Mechanics
Sept 17-19		Annual Technical Conferencs of the American Society for Composites

2008

May 21-23 Seventh International Conference on Advances in Fluid Mechanics
Rachel Swinburn, Conference Manager - AFM 2008, Wessex Institute of Technology
Ashurst Lodge, Ashurst, Southampton, SO40 7AA
Telephone: 44 (0) 238 029 3223

India Participant News

Altair India

The 3rd edition of the "India/South Asia CAE Users Conference 2007" is scheduled from August 9-11, 2007 at The Leela, Bangalore, India

Enterprise Simulation is becoming strategic for manufacturing companies as a driver for product innovation. The 3rd INDIA/S.ASIA CAE Users Conference 2007, will highlight the latest trends, developments and applications in the important field of enterprise CAE.

The 3rd INDIA/S.ASIA CAE UC 2007 will showcase cutting edge methods, applications and industry examples of CAE driven innovations. From modeling to simulation to optimization, papers and presentations will cover all aspects of virtual product analysis.

The conference will bring together leading engineers and engineering managers from various industries with a common interest in engineering simulation and innovation.

- Crash/Safety Simulation
- Fluid-structure interaction
- Multi-body Simulation
- Multi-body dynamics (MBD)
- Performance Data Management
- Process Automation and simulation
- Grid Computing and Workload Management
- Structure NVH
- Biomechanics
- Vehicle Dynamics
- Manufacturing Simulation
- Design Optimization
- Enterprise simulation

http://www.altair-india.com/events/uc2007

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Engineer's Market Place

gdex.jp

is your one stop source to find any Japanese products! We currently offer a wide selection of Japanese games, CD / DVDs, Electronics, and more! gdex.jp was founded in May 2006,

GDEX Inc.

APPLE STORE

Apple Store for Education. College Students save on MacBooks and more.

The perfect fit. Find accessories designed for your iPod at the Apple Store.

Apple products on clearance with a One Year Warranty!

LS-DYNA Resource Page

MPP Interconnect and MPI

FEA Information Inc. Participant's (alphabetical order)

Fully QA'd by Livermore Software Technology Corporation

TABLE 1: SMP - Fully QA'd by LSTC	
AMD Opteron	Linux
FUJITSU Prime Power	SUN OS 5.8
FUJITSU VPP	Unix_System_V
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
IBM Power 4/5	AIX 5.1, 5.2, 5.3
IBM Power 5	SUSE 9.0
INTEL IA32	Linux, Windows
INTEL IA64	Linux
INTEL Xeon EMT64	Linux
NEC SX6	Super-UX
SGI Mips	IRIX 6.5 X
SGI IA64	SUSE 9 with ProPack 4 Red Hat 3 with ProPack 3

TABLE 2: MPP Interconnect and MPI

Vendor	O/S	HPC Intereconnect	MPI Software
AMD Opteron	Linux	InfiniBand (SilverStorm), MyriCom, QLogic InfiniPath	LAM/MPI, MPICH, HP MPI, SCALI
FUJITSU Prime Power	SUN OS 5.8		
FUJITSU VPP	Unix_System_V		
HP PA8000	HPUX		
HPIA64	HPUX		
HP Alpha	True 64		
IBM Power 4/5	AIX 5.1, 5.2, 5.3		
IBM Power 5	SUSE 9.0		LAM/MPI
INTEL IA32	Linux, Windows	InfiniBand (Voltaire), MyriCom	LAM/MPI, MPICH, HP MPI, SCALI
INTEL IA64	Linux		LAM/MPI, MPICH, HP MPI
INTEL Xeon EMT64	Linux	InfiniBand (Topspin, Voltaire), MyriCom, QLogic InfiniPath	LAM/MPI, MPICH, HP MPI, INTEL MPI, SCALI
NEC SX6	Super-UX		
SGI Mips	IRIX 6.5	NUMAlink	MPT
SGI IA64	SUSE 9 w/ProPack 4 RedHat 3 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 having 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

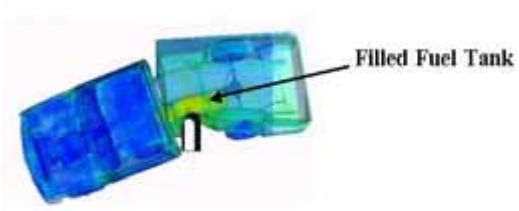
Includes a complete CAD interface capable of importing, modeling and analyzing, any die design. Available for PC, LINUX and UNIX, DYNAFORM couples affordable software with today's high-end, low-cost hardware for a complete and affordable metal forming solution.

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. Joint solution can also be used in conjunction with a full suite of Virtual Product Development tools via a flexible, cost-effective MSC.MasterKey License System.



Side Impact With Fuel Oil Inside

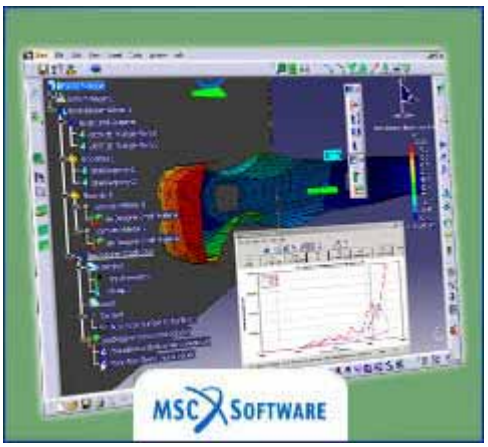
MSC.Software - MSC.Nastran / SOL 700

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

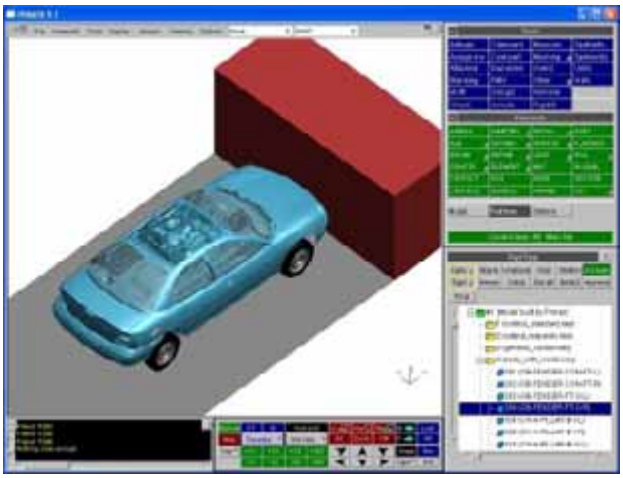
Gateway for LS-DYNA provides you with the ability to access basic LS-DYNA simulation capabilities in a fully integrated and generative way. Accessed via a specific Crash workbench on the GPS workspace, the application enhances CATIA V5 to allow finite element analysis models to be output to LS-DYNA and then results to be displayed back in CATIA. Gateway for LS-DYNA supports explicit nonlinear analysis such as crash, drop test, and rigid wall analysis.



Gateway products provide CATIA V5 users with the ability to directly interface with their existing corporate simulation resources, and exchange and archive associated simulation data.

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.



EASi-CRASH DYNA

EASi-CRASH DYNA is the first fully integrated environment for crashworthiness and occupant safety simulations with LS-DYNA, and covers the complete CAE-process from model building and dataset preparation to result evaluation and design comparisons.

EASi-CRASH DYNA can be used for concept crash, FE crash and coupled rigid body/FE crash simulations in conjunction with MADYMO.

EASi-CRASH DYNA's main features include:

Support of all keywords of LS-DYNA 970/971

Powerful mesh editing features, such as automesh and remesh

LS-DYNA/MADYMO coupling capabilities for pre- and post processing

Model Assembler for organizing the model through sub assembly/sub models and included files

Enhanced Weld tools for manipulation of connections and Weld comparison

Simple dummy positing and seat belt routing

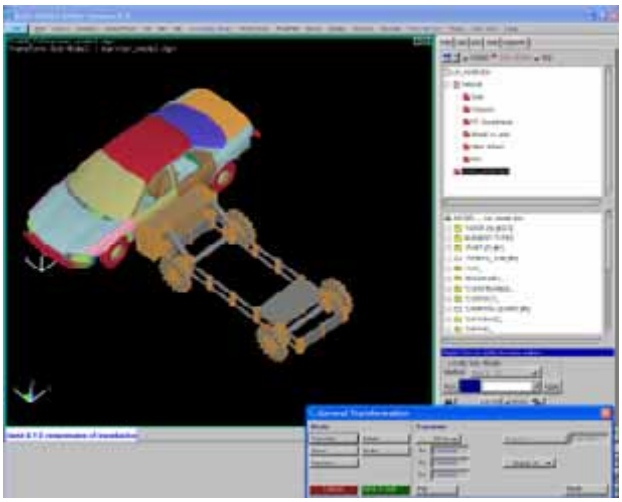
Pre and Post processing in same environment

Superpose and merge multiple models

Animation and plotting

Process compatible

Full capability to handle IGES, CATIA V4, CATIA V5, UG and NASTRAN files



Hardware - Computing - Communication Products

Logo's hyperlink to company's website

Software Distributors

Alphabetical order by Country

Australia	Leading Engineering Analysis Providers
Canada	Metal Forming Analysis Corporation
China	ANSYS China
China	Arup
China	MSC. Software – China
Germany	CAD-FEM
Germany	DynaMore
India	Altair Engineering India
Italy	EnginSoft Spa
Japan	Fujitsu Limited
Japan	The Japan Research Institute
Japan	ITOCHU Techno-Solutions Corporation
Korea	Korean Simulation Technologies
Korea	Theme Engineering

Software Distributors (cont.)

Alphabetical order by Country

Netherlands	Infinite Simulations Systems B.V.
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

(continued on next page)

Alphabetical Order By Country

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Canada Kingston, Ontario	Metal Forming Analysis Corp. Chris Galbraith galb@mfac.com (613) 547-5395
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India Bangalore	Altair Engineering India Nelson Dias info-in@altair.com 91 (0)80 2658-8540
Italy Firenze	EnginSoft Spa info@enginsoft.it 39 055 432010
UK Solihull, West Midlands	ARUP Brian Walker brian.walker@arup.com 44 (0) 121 213 3317
USA Austin, TX	KBEC L.C Khanh Bui kdbui@sbcglobal.net (512) 363-2739
USA Windsor, CA	SE&CS Len Schwer len@schwer.net (707) 837-0559

Consulting and Engineering Services

(continued)

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ETA	Engineering Technology Associates, Inc. (248) 729-3010 sales@eta.com

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USA	Dr. Ala Tabiei	University of Cincinnati

Informational Websites

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

LSTC LS-DYNA Support Site	www.dynasupport.com
FEA Informationwebsites	www.feainformation.com
TopCrunch – Benchmarks	www.topcrunch.org
LS-DYNA Examples (more than 100 Examples)	www.dynaexamples.com
LS-DYNA Conference Site	www.ls-dynaconferences.com
LS-DYNA Publications to Download On Line	www.dynalook.com
LS-DYNA Publications	www.feapublications.com