CIMdata

PLM Industry Summary

Christine Bennett, Editor

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Top Story

The Passing of a PLM Industry Visionary

7 June 2010

Peter Bilello, acting President of CIMdata, today issued the following statement: "CIMdata is saddened to announce that Eddy D. Miller, CIMdata President and a pioneer in the Product Lifecycle Management (PLM) industry, died Sunday, June 6, 2010, after a short illness. Ed was a valuable colleague and friend whose wit and wisdom will be sorely missed."

Mr. Miller, who was born on April 21, 1949 in Linton, Indiana, is survived by his wife Karen, his daughter Jana, his son Ryan, and his sister Barbara Reed, as well as countless colleagues and friends around the world who knew and respected him both professionally and personally. Mr. Miller attended Purdue University and graduated in 1971 with a Bachelor of Science degree in Electrical Engineering. He was a member of Eta Kappa Nu and Tau Beta Pi Engineering honoraries. He received a Master of Science degree in Engineering from The University of Michigan in 1973. Upon graduation, Mr. Miller went to work for the Burroughs Corporation. He later joined Manufacturing Data Systems, Inc. (MDSI), an Ann Arbor firm, focused on the development and marketing of software for control of machine tools.

Mr. Miller joined CIMdata in 1985, and throughout his career was a leading champion for the development and use of PLM to improve the abilities and methods for designing, manufacturing, and servicing products of companies in all industries. Starting with the inception of Product Data Management (PDM) in the mid-1980's, Mr. Miller worked diligently with industrial companies around the world to help them learn the benefits that PDM, and later PLM, could deliver to their businesses. He helped them understand how to define their needs, select technologies and solutions, and implement those solutions in the most effective manner for their specific business. Likewise, he worked actively with the suppliers of PLM solutions throughout the world to help them recognize the needs of the industrial community and create effective solutions and marketing strategies. Mr. Miller also prompted academic institutions to understand the need for, and importance of, providing PLM education to students of all ages so that they would be better prepared to work effectively.

During Mr. Miller's tenure as CIMdata President, he focused on building CIMdata's global brand, growing the company from a North American PDM management consulting and research firm to a globally-recognized leader in the PLM market. Today, CIMdata's global client list includes organizations of all sizes from many different industries that are served by CIMdata offices in America, Europe, and Asia. Over the years, Mr. Miller was instrumental in attracting and retaining some of the industry's best and brightest PLM professionals. The team Mr. Miller put into place continues to provide world-leading strategic PLM-related advice and counsel. Mr. Peter Bilello, recruited by Mr. Miller in 1997, has assumed Mr. Miller's responsibilities and will continue to manage the company from its headquarters in Ann Arbor, Michigan.

Mr. Miller was generally recognized as the "Father" of PDM and the foremost worldwide authority on the PLM marketplace and technologies. He was a PLM spokesperson and visionary who continually looked forward to see and define how PLM solutions could and should evolve to provide increasingly

better solutions and benefits for companies and users. Mr. Miller authored numerous industry articles and was a frequent keynote speaker at PLM solution supplier and industrial events around the world. Mr. Miller's vision will continue to shape the industry for years to come.

Mr. Alan Christman, Chairman of CIMdata, stated, "I knew Ed for more than 20 years. He was both a business partner and a personal friend. He was highly regarded by those that knew him and well respected by all within the global PLM community. He will be greatly missed by his family and friends, his CIMdata colleagues, many business associates, and by the PLM industry at large."

We are happy to forward any messages you may wish to send to Mr. Miller's family. Please email them to info@CIMdata.com.

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Acquisitions

Dassault Systèmes Acquires Exalead

9 June 2010

Dassault Systèmes (DS) and Exalead announced that Dassault Systèmes acquired the French company Exalead for about €135 million.

Every month, over 100 million people rely on Exalead for information search, access and reporting, including people in companies like Sanofi-Aventis and World Bank for business use, and Friendster, Lagardère Active and ViaMichelin for contextual consumer search. Exalead provides the industry's only platform designed from the ground up to apply advanced semantic processing to Web-scale data volumes and usage. Exalead brings unique scalability, agility and usability to industries such as Banking, Retail, Publishing, Business Services, Life Sciences and Consumer Services where an easy access to information is essential.

"To accelerate the deployment of Search-Based Applications in all market sectors, we needed a strong international partner," comments Alain Cotte, CEO, Exalead. "This alliance represents a tremendous opportunity for our partners and customers who will benefit from Dassault Systèmes' global presence." Exalead Co-Founder François Bourdoncle adds, "With our real-time search, natural language capabilities, Exalead provides a unique Web user experience. The combination with 3D represents the next generation of information technology for lifelike experiences. With Dassault Systèmes the number of people who will benefit from our technology will explode."

"The world of innovation is everywhere and information intensive", said Bernard Charlès, President & CEO, Dassault Systèmes. "Everyone is looking for simplicity with intuitive applications ("life-like") which value the rich information available inside and outside companies. With Exalead and its partners, we can provide a new class of search-based applications for collaborative communities." Bernard Charlès adds: "I would like to salute the critical role Qualis played in assembling such a great team with deep scientific skills, giving it the means to develop into a true leader in search technology and applications, and deciding to hand it to us to further its development on a worldwide level."

Emmanuel Coste, Partner, Qualis, commented: "We are confident that the Exalead adventure will accelerate with Dassault Systèmes. It was not a light decision, but one we made with the deep understanding of the fit for Exalead within Dassault Systèmes we gained through the discussion and implementation of both a technological and a commercial partnership."

A statement to which Yvan Proteau, Vice President, IS/IT, Yellow Pages Group, adds: “The combination of these entities will help organizations like ours create better user experiences based on the delivery of information and data in an innovative manner that leverages the latest in 3D technology that consumers have long demanded.”

Paul Hermelin, Vice Chairman and Group CEO, Cap Gemini, comments: “With Exalead, DS has chosen the path of openness, ensuring full “as a service” flexibility for Enovia and opening up new opportunities for the development of high added-value business applications. This position is extremely promising for us. We were among the first to identify Exalead and its SBA model as a disruptive force in IT. We can already see the advantages of this union for our manufacturing customers, of course, but it is also clear to us that our customers in forward-edge sectors will benefit significantly from the synergy.”

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Synopsys to Acquire Virage Logic Corporation

10 June 2010

Synopsys, Inc. and Virage Logic Corporation, a leading independent provider of semiconductor intellectual property (IP) for the design of complex integrated circuits, announced they have signed a definitive agreement for Synopsys to acquire Virage Logic. Virage Logic's offering will complement Synopsys' DesignWare® interface and analog IP portfolio by adding embedded memories with test and repair, non-volatile memories (NVMs), standard cell libraries, and programmable cores for control and multimedia sub-systems. With this acquisition, Synopsys will strengthen its ability to help design teams achieve their system-on-chip (SoC) development goals by providing them with a more comprehensive portfolio of production-proven, high-quality IP and excellent worldwide technical support.

Under the terms of the agreement, Synopsys will pay $12.00 cash per Virage Logic share, resulting in a transaction value of approximately $315 million, or approximately $289 million net of cash acquired. The transaction is subject to regulatory and Virage Logic shareholder approval, as well as other customary closing conditions.

The boards of directors of both companies have approved the transaction, and Virage Logic President and CEO Alex Shubat will join Synopsys. After the closing, Virage Logic will become part of Synopsys, and Virage Logic stock will cease trading. The transaction is expected to close in the fourth quarter of Synopsys' fiscal 2010. Therefore, Synopsys anticipates the transaction to be neutral to non-GAAP earnings per share in fiscal 2010, and accretive in fiscal 2011.

"With more functionality being integrated into a single device, high-quality IP continues to be key for enabling designers to reduce integration risk and speed time-to-market," said Dr. Aart de Geus, chairman and CEO at Synopsys. "Bringing Synopsys and Virage Logic together broadens our portfolio and builds on two very strong technical teams. It is also in line with what so many customers are looking to Synopsys to address: a way to quickly incorporate standard functions into their SoCs so they can focus on developing differentiated products."

"When I co-founded Virage Logic in 1996, it was with the belief that a semiconductor IP company could provide the technically superior building blocks that the industry needed to accelerate development of high quality, cost-effective end products," said Dr. Alex Shubat, president and CEO of Virage Logic. "Today, the transition to a fabless, or 'fab-lite' model, coupled with the explosion in SoC product development costs at the advanced process nodes, has resulted in an escalating need by the

semiconductor manufacturers for production-proven IP. By joining forces with Synopsys' impressive engineering team and by gaining access to their global channel, we will be able to accelerate the development and delivery of our broad product offering to help customers meet their design-for-profitability goals. I am excited to join Synopsys to further my original vision."

Webcast Scheduled

Aart de Geus, chairman and CEO of Synopsys, and Brian Beattie, chief financial officer, will host an audio webcast to discuss the merger on June 10, 2010, at 6:00 a.m. PT, 9:00 a.m. ET. An archive of the webcast will be available starting June 10 at 7:30 a.m. PT, 10:30 a.m. ET, and remain available for approximately 60 days. Webcast access is available at http://www.synopsys.com/Company/InvestorRelations.

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CIMdata News

CIMdata Announces Date and Location of Its Next CIMdata PLM Certificate Program

8 June 2010

CIMdata, Inc., the leading global Product Lifecycle Management (PLM) management consulting and research firm announces that the next CIMdata PLM Certificate Program is to be held in Oslo, Norway from September 20-24, 2010. The CIMdata PLM Certificate Program is the flagship offering of CIMdata PLM Leadership—the PLM industry's most comprehensive non-biased education and training offering for today's PLM professionals.

The CIMdata PLM Certificate Program prepares PLM professionals at several levels to successfully address the challenges inherent in PLM implementations. This assessment-based certificate program includes an intimate classroom experience, individual and team-based exercises, and individual evaluations of achievement. Additionally, the program provides candidates with intensive and extensive exposure to a team of CIMdata experts. Upon successful completion of the program, each participant receives a CIMdata PLM Certificate and thereby becomes a member of CIMdata's global PLM Leadership community.

"As a region, Scandinavia has always had a very robust and diverse industrial base. Over the past several years, PLM has been recognized throughout many industrial sectors as a key strategic business initiative to sustain industrial robustness and provide a competitive advantage. Given this recognition, we believe that now is the right moment to bring our CIMdata PLM Certificate Program to the region." said Mr. Peter Bilello, CIMdata's Vice President. The program will be hosted by CIMdata's newest PLM Leadership Alliance Member, Summit Systems.

PLM Certificate Program participants can register online for either the 3-day or complete 5-day program. This certificate program is available to industrial companies who are considering and/or implementing PLM, and to PLM technology and service suppliers. The CIMdata PLM Certificate Program is built on CIMdata's more than 25 years of extensive worldwide experience guiding industrial companies in successfully defining and implementing best-in-class PLM strategies and tactics. Please refer to CIMdata's website at http://www.cimdata.com/services/education/plm_certificate.html for detailed information on the CIMdata PLM Certificate Program, and for registering to it.

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Company News

Advanced Innovation Tools of Spain Joins the Aras PLM Software Partner Program

9 June 2010

Aras® announced that Advanced Innovation Tools (AIT), a PLM systems integrator located in Barcelona, Spain, has joined the Aras Partner Program.

AIT combines system integration and consulting services with PLM expertise to ensure the successful implementation and deployment of enterprise-wide PLM initiatives. With a staff of skilled and knowledgeable professionals, AIT utilizes an innovative process methodology to model, organize and manage business strategies and ensure client success.

“Like our PLM customers, AIT is committed to quality, collaboration and continuous improvement,” said Peter Schroer, President of Aras. “We welcome AIT to the Aras partner network and Aras Community, and we look forward to working with them to address the enterprise PLM needs of companies throughout the region.”

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Autodesk Seek Gains Ground with Building Product Manufacturers, Design Professionals

10 June 2010

Autodesk, Inc. announced that the company’s Autodesk Seek web service is averaging more than 900,000 searches per month, while providing nearly 300,000 downloads of building product information and models to architects, engineers and other design professionals per month. This represents a year-over-year increase of over 165 percent.

Launched at the 2008 AIA Expo, Autodesk Seek is a free* web service that enables architects and design professionals to discover, preview and download branded and generic building information modeling (BIM) models, drawings and specifications. Users can access Autodesk Seek directly from AutoCAD and Revit-based software applications or via the Seek website. Seek has grown to include over 35,000 products from nearly 1,000 manufacturers.

Autodesk also announced that Autodesk Seek will be included as part of a new McGraw-Hill Sweets BIM Package for building product manufacturers (BPMs), building on the existing collaboration between the two companies. With this new package, manufacturers can have high-quality BIM models of their products created through the network of Autodesk Content Service Providers and include these models in both the Autodesk Seek web service and Sweets.com.

“In the past six months, traffic on Autodesk Seek has doubled, due in large part to the increase of high-quality building information models available via the service,” said Jeff Wright, senior director, Autodesk Content Network. “The combined offering of Autodesk Seek and McGraw-Hill Construction Sweets will help expedite the creation and distribution of high-quality BIM models for the widest variety of BPMs. As industry leaders, Autodesk and McGraw-Hill Construction are well positioned to help manufacturers connect with architects and designers.”

“The combination of the McGraw-Hill Construction Sweets brand coupled with Autodesk’s Seek web

service and deep understanding of BIM represent powerful tools for architects and design professionals," said Per Lofving, senior director, McGraw-Hill Construction. "This new offering enables designers to discover, preview and download branded BIM models directly into their designs, while providing building product manufacturers with a unique, targeted method to connect with designers early in the design process."

Autodesk Seek offers a highly targeted online marketing channel for building BPMs who want to reach the professional designers who specify and recommend their products for purchase. According to a recent survey of Autodesk Seek users, nearly 50 percent use Seek on a weekly basis, more than 60 percent recommend or specify products and 77 percent consider it likely that the products that they recommend or specify will be purchased. Autodesk Seek thus offers a highly qualified audience for BPMs to make models of their products available for download.

"I started using Autodesk Seek with Autodesk Revit Architecture two years ago," says Kristy Van Zant, NCARB, senior tech architect at The Design Partnership LLP. "It has helped me save time and reduce errors by providing me with dependable and accurate product models. It's great to see a growing number of manufacturers provide their BIM models on Seek -- that's a good trend for architects."

Availability

To learn more about the Autodesk Seek/McGraw-Hill Sweets offering, visit www.SweetsBIMforManufacturers.com.

*Free products and services are subject to the terms of use that accompany them.

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AVEVA Joins the Business Software Alliance as a New Worldwide Member

8 June 2010

AVEVA Group plc announced that it has joined the Business Software Alliance (BSA), the foremost organization dedicated to promoting a safe and legal digital world.

"It is with great pleasure that we announce AVEVA's membership in the Business Software Alliance," said Richard Longdon, Chief Executive of AVEVA. "BSA is a strong voice for the software industry on key policy, business and legal issues -- from software piracy to cybersecurity."

"Software piracy is a major industry concern. It is not a victimless crime; it damages businesses like AVEVA, which create technologies that the world relies on and it imperils the livelihoods of the skilled professionals we employ. More importantly, the danger with the use of pirated software in the engineering industries that AVEVA serves is that can put lives at risk. We look forward to working with BSA and its members to tackle these issues and promote the interests of the technology industry and the many businesses we support."

Robert Holleyman, president and CEO of Business Software Alliance, said: "BSA and AVEVA share a common goal in tackling the threats of software piracy. We are excited about AVEVA becoming member of BSA as it will no doubt prove to be a critical partner by lending its voice to important policy, education and enforcement initiatives that foster IT growth in the global marketplace."

"The success of our organization and our industry relies largely on success of our member companies -- and AVEVA has proven itself to be not only a success, but an industry leader. We look forward to working with this dynamic company," said BSA's Holleyman.

For more information about Business Software Alliance, please visit http://www.bsa.org/

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Bentley Appoints Dru Crawley, 'Father of EnergyPlus,' as Director, Building Energy Performance Products

10 June 2010

Bentley Systems, Incorporated announced it has appointed Dru Crawley, Ph.D., AIA, FASHRAE, to the newly created position of director, Building Energy Performance Products. Prior to joining Bentley, Dr. Crawley was Commercial Buildings Team Lead at the U.S. Department of Energy (DOE). He is renowned throughout the "green" building field for leading the development of the U.S. DOE's EnergyPlus simulation engine, which identifies potential energy savings by modeling heating, cooling, ventilating, lighting, water, and other building energy flows. Dr. Crawley has more than 30 years of experience in government research and standards development organizations, and building design, energy consulting, and engineering software companies. He is an expert in the energy efficiency, renewable energy, and sustainability of buildings. At Bentley, Dr. Crawley will be responsible for developing building energy and sustainability design simulation and analysis tools. In addition, he will oversee the company's comprehensive suite of energy performance products, including Hevacomp Simulator V8i, Hevacomp Mechanical Designer V8i, and Bentley Tas Simulator V8i. Dr. Crawley reports to Santanu Das, Bentley vice president, Building, Structural, and Bridge.

Formerly, Dr. Crawley led the U.S. DOE's Commercial Building Initiative, which was created to achieve cost-effective net-zero energy commercial buildings by 2025 and includes the Commercial Building Energy Alliances and Commercial Building Partnerships. He was also responsible for managing its building energy software tools research and development activities, including -- in addition to EnergyPlus -- OpenStudio plug-in for Google SketchUp, Energy-10, and DOE-2.

Dr. Crawley earned a Ph.D. in Mechanical Engineering from the University of Strathclyde in Glasgow, Scotland. His doctoral thesis focused on building simulation as a policy tool, looking at the potential impact of climate change on the built environment. A registered architect, he is an active member of the American Institute of Architects (AIA), the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the International Building Performance Simulation Association (IBPSA), and the United States Green Building Council (USGBC). Dr. Crawley has published more than 100 papers and articles, and has made more than 250 presentations on building energy efficiency, sustainability, and renewable energy topics.

For additional information about Bentley's software for building energy design, analysis, and simulation, visit http://www.bentley.com/green.

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CAD Gorilla Releases 2011 Autodesk Inventor for Beginners Training

10 June 2010

CAD Gorilla, an Autodesk Authorized Developer, announced the release of its self-paced video training course for Autodesk Inventor 2011.

CAD Gorilla’s “Inventor for Beginners” video training course introduces users to 3D parametric

modeling and was written from the perspective of brand new users. Within 2 hours users learn how to navigate the interface, create sketches, set up parametric relationships, and create 3D models. The course also covers how to create assemblies and how to generate production-ready 2D drawings of 3D parts and assemblies. This course is ideal for anyone looking to get comfortable using Autodesk Inventor, in a short amount of time.

Drew Adams, Product Development Manager of CAD Gorilla remarks, "There's never been a course that makes it so easy to get started using Autodesk Inventor. By applying our video production techniques with proven instructional design methodology, we've designed a one of a kind solution for people who are serious about learning Inventor in a self-paced format."

The Inventor for Beginners course includes two hours of interactive video instruction designed by professional instructors, plus downloadable exercise files, and assessment exams that support the user throughout each step in their learning path.

Autodesk Inventor for Beginners is available direct from CAD Gorilla or through a growing number of Autodesk resellers. The single user retail price is $149 with volume discounts for multi-user implementations.

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Dassault Systèmes' Lifelike Experience Technology Enables First 3D World Expo

11 June 2010

Dassault Systèmes (DS) announced that its 3D technologies contribute to the success of the Shanghai World Expo virtually and physically. Dassault Systèmes' 3DVIA brings a lifelike virtual environment of the World Expo online pavilions by way of 360-degree space tours and real-time 3D interaction. In addition, Dassault Systèmes' SIMULIA simulation technology has ensured the safety of the Expo Axis, one of the most remarkable attractions at the Expo Park, by providing accurate anti-seismic and buckling analysis in 3D before the building was even built, avoiding unnecessary waste in cost and time.

Since its official launch on May 1, the World Expo Online has attracted significant attention of netizens worldwide. According to statistics from the Bureau of Shanghai World Expo, the Expo Online has already received over 160 million page views, and a major number of the visits went to the "Experiencing Pavilions." The experiencing type of pavilions is presented in 3D format. DS's 3DVIA Virtools, the software recommended by the Bureau to build the experiencing type of pavilions, has contributed to many popular and highly recognized virtual 3D pavilions, such as those of France, Belgium, Jilin, Shandong, Guizhou, Taipei, and Vanke.

Through 3DVIA's lifelike experience technology, the romantic roof garden and the seven artistic treasures from the Musée d'Orsay are perfectly represented in the virtual world. It also built a splendid "Kite Forest" for the Mexican Pavilion, a vivid great waterfall for the Guizhou Pavilion and the high-tech atmosphere with the virtual dancing images of the Taipei Pavilion, all in 3D.

3D pavilions can create unique experiences that physical pavilions cannot provide. Thanks to 3DVIA, numerous experiencing type of pavilions lead online visitors into a virtual space to enjoy wonderful 3D interactive experience. For example, visitors to the online French Pavilion can "fly" to the Musée d'Orsay with just one click of a mouse and for the first time appreciate the masterpieces in the format of 3D; visitors to the online Jilin Pavilion are instantly greeted by the "band" consisting of a squirrel, frog, woodpecker and morning glories to play a rock-style song, "The Sound of Changbai Mountain," and

enter a fairytale-like snow scene where a seemingly tranquil snowman may suddenly throw snowballs onto your screen; within just a few seconds, visitors can immediately immerse themselves into a snow-covered 3D scene and head straight to the top of the Changbai Mountain on dogsleds. Likewise in the Shandong Pavilion, visitors can climb the famous Mount Taishan and meet the Chinese sage, Confucius.

Through the augmented reality (AR) technology, visitors can enjoy another level of 3D interactivity. In the online Vanke Pavilion, visitors can experience a virtual adventure to an anthill where they will be invited by the lovely white ants to help pump in fresh air in their natural air conditioning system. Similarly, visitors can freely play with the Taipei 101 Building on their own hands in the online Taipei Pavilion.

"The Online World Expo is a pioneering undertaking in the World Expo history," said Wang Liping, chief operation officer of Expo Website Management Office and deputy director of Expo Communication & Promotion Dept, Shanghai World Expo. "The application of the 3D technology has enriched the Expo by making it even more exciting. The 3D interactivity not only provides more attractive visual effects, but also allows more participation by people around the world. Dassault Systèmes' 3D technology and its great support are important guarantees for a splendid, successful and unforgettable World Expo."

In addition to helping build the world's first Expo Online, DS's 3D technologies also contribute to the success of the physical Expo.

The 1-kilometer-long, 110-meter-wide Expo Axis is the main artery of landscape, people and traffic flow of the Expo Park. It is also the largest single work of the World Expo Park. The gigantic, conical "Sunny Valley" along the Expo Axis makes one of the most marvelous highlights of the park. The six horn-shaped "Sunny Valleys" have a maximum diameter of 99 meter at the top and 22 meter at the bottom as the steel structure consists of 1,700 units, which makes it a rare building of a cable-film structure and presents a tremendous challenge to the architects and builders.

SIMULIA Abaqus, advanced 3D simulation analysis software from Dassault Systèmes, was used to perform dynamical elastic-plastic time-dependent analysis for the principal structure of the Expo Axis, obtaining accurate results about the anti-seismic elasticity of the building through 3D simulation. It has also been used to make structural buckling analysis for the "Sunny Valley" to ensure the overall balance and safety of the giant cone and provide maximum safety guarantee for tens of millions of visitors to the World Expo.

SIMULIA Abaqus was also adopted for the excavating simulation for the transformer substation of the Expo, which is the world's largest and first fully underground and entirely cabled substation. The accurate simulation and analysis of underground works before the construction started has greatly lowered the probability of re-work and waste of materials, providing a secure foundation for the power supply of the World Expo Park.

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ESI North America Fuel Cell Simulation Advancements Presented to Department of Energy (DOE)

9 June 2010

Significant enhancements in the simulation of automotive **fuel cell** performance were presented to the Department of Energy (DOE) Hydrogen Program and Vehicle Technologies Program Annual Merit Review and Peer Evaluation Meeting today. This program seeks to improve the ability to use simulation

to conduct a detailed study of how various **fuel cell** component structures and properties affect the gas and water transport in Proton Exchange Membrane (PEM) **fuel cells**. Engineers from **ESI North America** have been an integral part of this project during the last three years.

Proton exchange membrane fuel cells can be utilized as a zero-emission power source for many transportation applications. The most critical technical challenges facing the commercialization of fuel cell vehicles are cost reduction, durability, water management, freeze tolerance and power density.

"Virtual prototyping using advanced multi-physics simulation to understand the complex interactions of physical phenomenon is a required supporting technology to bring commercially viable fuel cell vehicles to the mass market" said Joseph Strelow, Director and Chief Engineer of Government Programs at ESI North America "The electrochemical reactions, the concentrations of performance degrading pollutants, and their impact on the durability of cell structures cannot be measured directly in a functioning fuel cell. Available simulation options have lacked the ability to represent the precise physics necessary for further advancements in performance. We are proud to be working with our industry and academic partners, with the support of the Department of Energy, to resolve these fundamental issues."

The activities presented included the results of additional experimental validation of the ESI water transport models in the gas diffusion layers, channels, and across interfaces. This improved understanding of water transport allowed new concepts to remove water and control its distribution to be evaluated. Further integration of the water management simulations with existing electrochemistry and heat transfer models was undertaken as well, creating a solution to study increasing power densities and transient performance.

This four year project was started in 2007 with a total budget of $6.4M. The work is a collaboration of seven technologies, industrial and academic partners. Today was the final mid-program review. The project is expected to be completed in May 2011.

For more information on ESI's applications for the Energy and Power Generation industry, visit: http://www.esi-group.com/industries/energy-power

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Infor Promotes Soma Somasundaram to Head Global Product Development

10 June 2010

Info announced that Soma Somasundaram has been named senior vice president, Global Product Development, reporting to CEO Jim Schaper. Somasundaram is now the company's highest-ranking R&D executive, responsible for defining overall software and technology strategies, as well as managing the design and rollout of the company's full suite of business applications and interfaces.

Somasundaram, who has been with Infor since 2002 and has 30 years experience in ERP, supply chain and financial applications, has been promoted to senior vice president, Global Product Development.

In his new role, Somasundaram will be responsible for:

· Defining overall software and technology strategy, working jointly with Chief Strategy Officer Bruce Richardson.

· Working closely with the Infor Solution Management organization and key customers to define solution roadmaps and execution plans.

· Managing worldwide product development team leads in the design and rollout of all Infor applications and interfaces.

· Accelerating time-to-value for customers by delivering vertically-tailored solutions that can be deployed faster with less disruption.

Additional Resources

Note: registration may be required to access online content

Infor software solutions – http://www.infor.com/solutions/

Infor's leadership – http://www.infor.com/company/leadership/executives/

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Invention Machine Adds New Resellers To Its Growing Innovation Network

8 June 2010

Invention Machine announced it has added several new resellers in the Americas to meet the growing demand for its innovation software, Invention Machine Goldfire. These new companies are joining forces with Invention Machine as more and more organizations are looking to boost and sustain their innovation process to enhance their competitive-edge. In addition, Goldfire is gaining popularity among scientists and researchers in the US Federal Government as they accelerate their programs to meet the national innovation agenda.

Goldfire, the innovation intelligence platform, combines innovation workflows and collaboration capabilities with precise access to corporate and external knowledge, allowing customers to achieve repeatable, sustainable innovation. It identifies, validates and ranks ideas and helps deliver the right products the first time, mitigating innovation risks.

Resellers collaborating with Invention Machine include:

Acuity is an engineering technologies partner to entrepreneurial product design and manufacturing companies. Focused on improving operational efficiencies, Acuity is adding Goldfire to its product offerings to infuse sustainable innovation process into their customers Product Lifecycle Management (PLM) system.

Daystrom Technologies is a leading provider of design, analysis, manufacturing and PLM software solutions. With Goldfire, they can now help customers develop a repeatable innovation process that will accelerate product development.

Domain Systems is a PLM information technology systems integrator, software developer and engineering consulting organization providing leading edge consulting, integration, customization and support to its clients. Partnering with Invention Machine will allow them to meet their customers' innovation needs by increasing productivity and bringing additional structure to the problem solving process.

Impac Systems Engineering is a consulting organization, providing innovative engineering and manufacturing products and services. With Goldfire they can help customers meet today's economic challenges and foster sustainable innovation, resulting in high return on innovation and competitive products.

Innovation Management & Sustainable Technologies (IM&ST) is a leading innovation solutions and services provider, committed to improving and enhancing their customers' innovation capabilities. With Goldfire IM&ST customers in the Mexican and Latin American markets can leverage best practices for new product development, accelerate and enhance their innovation initiatives.

M2 Technologies is the largest manufacturing-focused CAD solutions provider in the northeast region of the United States, supported by a team of industry experts and leading consultants. With the addition of Goldfire in its portfolio, the company can empower their customers with every day innovation capabilities.

Three Wire Systems is a multi-faceted systems integrator providing program management and information technology solutions to the US Federal Government. Goldfire will allow them to offer tremendous value to the Federal customers with heavy focus on scientific research and responsibilities, particularly in the medical, defense and aerospace verticals.

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Mentor Graphics Publishes High-level Synthesis Reference Book in Answer to Increasing Adoption of Technology

9 June 2010

Mentor Graphics Corp. announced the availability of the High-level Synthesis Blue Book, by Michael Fingeroff, technical marketing engineer in the High-level Synthesis (HLS) group at Mentor. The High-level Synthesis Blue Book is a comprehensive guide for designing hardware using C++ and is written for hardware and system designers who are currently using, moving, or plan¬ning to move to a high-level synthesis design environment that lets them reduce the time to verified RTL.

The High-level Synthesis Blue Book explains the fundamentals of high-level synthesis and the essential principles of C-based hardware design, progressing from simple concepts such as sequential logic design, to more complicated topics such as memory architecture and hierarchical sub-system design. All the concepts presented in the book have practical application for developing hardware, and are illustrative independent of whether a designer is working in pure ANSI C++ or in SystemC.

The concepts are thoroughly illustrated with numerous code examples and rich supporting graphics of hardware and timing dia¬grams. Starting from simple practical cases, the examples ultimately translate to much larger, more complex designs typical of today’s multi-core SoC designs. On completion of reading the High-level Synthesis Blue Book, a designer should be well on the way to becoming an expert in using high-level synthesis.

“After talking with hundreds of customers using HLS tools, and many RTL designers wanting to move to HLS, we decided there were obvious things we could do to help accelerate the adoption and use of high-level synthesis technology,” said Simon Bloch, vice president and general manager, Design and Synthesis division at Mentor. “The High-level Synthesis Blue Book provides a firm foundation for writing high-quality synthesizable C++ code including recommendations for achieving superior quality of results in hardware and good programming practices to ensure "clean" code that passes compilation, execution, and RTL/C++ co-verification.”

The release of the High-level Synthesis Blue Book is just one of the many activities engaged in by Mentor to help hardware designer adopt HLS technology. Other programs include an active HLS silicon vendor program, as demonstrated by the Catapult® C tool support for TSMC RF 11, the certification of

multiple EDA vendor ESL flows, consulting services, extensive training, involvement in standards and a robust university program.

Interested in what's new in the Catapult C tool, including support for SystemC? Visit the **Mentor booth #1383 at the Design Automation Conference (DAC), June 14 – 16, 2010,** and register to attend the suite session titled: Catapult C Synthesis: A Game Changer for Full-Chip, High-Level Synthesis. For online registration prior to the conference visit: http://www.mentor.com/events/design-automation-conference/.

Availability

For a copy of the High-level Synthesis Blue Book, visit: http://www.hlsbluebook.com/.

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PTC Celebrates Customer Innovation With PlanetPTC Community

9 June 2010

PTC launched PlanetPTC Community, an online environment where PTC customers and other product development professionals can showcase their work, network with peers and inspire each other by sharing their success stories and experiences.

"PlanetPTC Community is more than a typical social networking site. PTC is transforming the way that we engage with our customers online based upon the results of an extensive research study conducted by Forrester Research," said Rob Gremley, executive vice president, Marketing, PTC. "PTC customers told us that they wanted access to great content and the ability to interact with, inspire and be inspired by other PTC customers through the sharing of ideas, challenges and solutions. Beyond that, they wanted a forum where they could recognize each other for their creativity and innovation. PlanetPTC Community is the result of those requests. In a very real sense it was created by and belongs to our customers."

"PlanetPTC Community is great because it encourages people like me, who have used PTC products for years, to share ideas and use cases easily. I'm also excited to connect with people from all over the world who share my interests in product design and development. I'm really happy that PTC took on this initiative because I believe PlanetPTC Community will bring together experts from many different engineering disciplines who will discuss their experiences and inspire the broader community."

Jason Clark, Senior Designer, OceanWorks

Content for PlanetPTC Community has been contributed by Diamond members (founding members) who share a passion for their work and are eager to inspire others with their success stories. PlanetPTC Community will employ the best in class Web 2.0 tools available. Featured tools include discussion forums, blogging and micro blogging, wikis, news feeds, file sharing, groups, content rating, commenting, tagging and friending. Members will also enjoy the opportunity to participate in contests where they will be awarded branded merchandise to accompany peer accolades for their showcased designs. A PTC community manager will be available to assist members with questions.

PlanetPTC Community is one part of an overall mix of dynamic channels that together make up PlanetPTC. PlanetPTC enables PTC customers and product development professionals to actively participate in exchanging ideas, success stories and best practices through three primary mediums:

PlanetPTC™ Community

An online showcase for product development professionals who want to inspire others with their work and success stories, and be inspired by the talent of their peers.

PlanetPTC™ Live!

A face-to-face event series that informs and empowers PTC customers through best-in-class education, product development news, and unique access to peers, PTC experts and partners - all delivered in an energizing and professional event format.

PlanetPTC™ Virtual

A user-friendly, online gathering that delivers real-time and on demand education, the latest product information, and valuable, virtual opportunities to engage with the worldwide network of PTC customers.

“PTC has vibrant, talented customers who have common interests and enjoy sharing their experiences with each other,” adds Gremley. “A community like PlanetPTC enables creativity to flourish, benefiting all participants. One question or idea leads to another and the enthusiasm of the community becomes contagious, which can promote incredible innovation!”

For more information please visit: community.planetptc.com

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Synopsys and IEEE-ISTO Launch an Industry Wide Technical Advisory Board to Evolve Interconnect Modeling Standard

7 June 2010

Synopsys, Inc. announced the open source availability of its widely used Interconnect Technology Format (ITF) for parasitic modeling and the formation of a technical advisory board (TAB) under the auspices of IEEE Industry Standards and Technology Organization (IEEE-ISTO). The purpose of the Interconnect Modeling TAB (IMTAB) is to facilitate the evolution of ITF and promote an interoperable interconnect modeling format to address the industry's advancing process technology and design needs. IMTAB founding members include representatives from industry-leading semiconductor companies, EDA companies and silicon foundries including Altera Corporation, AMD, Apache Design Solutions, GLOBALFOUNDRIES, LSI Corporation, Magma Design Automation, NVIDIA, Qualcomm, STMicroelectronics and Synopsys. Following the same model as the industry-standard Liberty™ library modeling format, ITF access is granted under an open source license through Synopsys' Technology Access Program (TAP-in(SM)) and is available free of charge to anyone.

"An interoperable interconnect modeling format is invaluable for our design teams at leading-edge technologies," said Philippe Magarshack, STMicroelectronics Technology R&D Group Vice President and Central CAD and Design Solutions General Manager. "A common format will allow us to seamlessly leverage various EDA tools that support it in our design flows and increase overall efficiency. We are quite pleased with Synopsys' proposal to advance interoperability in the industry and look forward to the adoption of ITF as an industry-wide standard."

"Synopsys has been at the forefront in promoting open industry standards through collaborative initiatives that foster greater interoperability and increase efficiency for the entire industry. Synopsys pioneered open sourcing of standards over a decade ago with the Liberty and SystemC standards," said Rich Goldman, vice president of corporate marketing and strategic alliances at Synopsys. "The creation

of the IMTAB similarly extends our standardization efforts to interconnect modeling, an area of increasing importance at advanced process technologies. By working with industry-leading member companies, we hope to replicate the success of Liberty and accelerate the evolution of Synopsys ITF into a common industry format."

"The IEEE-ISTO collaborates with a wide range of industry groups, providing a broad inclusiveness to bring open standards to fruition and to ensure their success in the market," said Peter Lefkin, IEEE-ISTO Marketing and Business Development Executive. "We are committed to providing the new EDA industry TAB initiative with the support necessary to help achieve its goals and objectives."

"We are pleased to join the IMTAB to advance an open standard for interconnect modeling," said Eugene Chen, director of CAD Engineering at Altera Corporation. "We look forward to working together with other founding members to enable broader adoption of the interoperable ITF format at advanced process technology to achieve better accuracy and turnaround time."

"The ITF open source licensing and the IMTAB announcement today by Synopsys will benefit the design community," said Prabhu Krishnamurthy, senior director of Design Tools and Methodology at LSI Corporation. "As a founding member of the IMTAB, LSI is committed to driving greater interoperability and creating opportunity to meet the rapidly evolving and emerging needs of designers at leading-edge process technologies."

"NVIDIA supports the open source licensing of the ITF format and the creation of the IMTAB," said James Chen, director of Advanced Technology at NVIDIA. "It will allow the member companies to contribute to the development of the popular format to address the common challenges in advanced process technologies and help to propagate the benefits of the increased interoperability to the rest of the user community."

"Our customers are faced with increasing parasitic extraction challenges as they transition to the smaller geometries of advanced technologies, threatening their productivity as well as silicon success," said Richard Trihy, director of Design Methodology at GLOBALFOUNDRIES. "The formation of a technical advisory board under the IEEE-ISTO will help forge collaboration and alignment in the industry to collectively address these challenges pro-actively in the interoperable ITF format."

"Magma is committed to promoting interoperability, opportunity and choice in the industry," said Robert Smith, vice president of Marketing of Magma's Design Implementation Business Unit. "We welcome Synopsys' open source licensing of the ITF format as the right step forward for increased openness and interoperability between EDA tools. We look forward to collaborating with the other founding members of the IMTAB and bringing the benefits of our coordinated efforts to tackle our customers' growing interconnect modeling concerns."

The IMTAB will initially consist of 12 members and will grow its membership over time. Member companies represent the broad semiconductor industry including the design community, EDA companies and silicon foundries. Requests for format enhancements can come from the membership as well as from the overall interconnect modeling format user base. Companies interested in membership in the IMTAB may contact IEEE-ISTO at imtab@ieee-isto.org.

About ITF

Synopsys' Interconnect Technology Format (ITF) provides detailed modeling of interconnect parasitic effects that enables designers to perform accurate parasitic extraction for timing, signal integrity, power and reliability signoff analysis. ITF offers a flexible and innovative format to accurately model the

effects of increased process variation at advanced process technologies. ITF has been evolving for more than 10 years and is the semiconductor industry's most widely used interconnect modeling format. It is supported by leading semiconductor foundries and integrated device manufacturers, and is proven on thousands of production designs.

The latest specifications for the open source licensed ITF can be found at http://www.synopsys.com/Community/Interoperability/Pages/TapinITF.aspx

About IEEE-ISTO

IEEE-ISTO is the trusted partner of the global technology community for the development, adoption, and certification of industry standards. Its mission is to facilitate the life-cycle of industry standards development through a dedicated staff committed to offering vendor neutrality, quality support and member satisfaction. Fostering the market acceptance, adoption and implementation of standardized technologies, IEEE-ISTO programs span the spectrum of today's information and communications technologies. To find out more about IEEE-ISTO, visit http://www.ieee-isto.org/.

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Events News

Apache Design Solutions at DAC 2010: Power and Noise Solutions for Chip-Package-System Convergence

8 June 2010

Apache Design Solutions will feature presentations by leading semiconductor companies including LSI, MoSys, STMicroelectronics, Texas Instruments, and TSMC, in **Booth #535** at the **47th Design Automation Conference (DAC)**. The conference will take place at the Anaheim Convention Center, Anaheim, CA, from June 14th to June 16th, 2010. Apache will exhibit their PowerArtist™, RedHawk™, Totem, and Sentinel platforms for power integrity and noise closure from RTL to silicon, analog to digital, and chip to package and system flows. Apache will also showcase their recently announced PathFinder electro-static discharge (ESD) integrity solution for addressing the growing reliability challenges of ESD induced issues. For information on customer presentations, product demonstrations, and tutorials, and to register for any of the sessions, please see http://www.apache-da.com/company/events/394.

Additional Apache Design Solutions activities at DAC include:

Technical Panel

Wednesday, June 16th, from 9:00 until 11:00 am

Room 207AB

3D Stacked Die: Now or Future?

Moderator:

Andrew Yang, Apache Design Solutions

Panelists:

Pol Marchal, IMEC

Riko Radojcic, Qualcomm

Myung-Soo Jang, Samsung

Philippe Magarshack, STMicroelectronics

LC Lu, TSMC

User Track

Tuesday, June 15th from 1:30 until 3:00 pm

2nd Floor Foyer, Adjacent to Room 208AB

- *Analysis of Power Delivery Network of Multiple Stacked ASICs using TSV and Micro-Bumps*
- *ESD Verification and ESD Aware Design Optimization for Complex System-on-Chip Design*

Thursday, June 17th from 9:00 until 11:00 am

Room 208AB

- *Package/PCB Aware On-Die Power Grid Noise Analysis*
- *Power Delivery Network Design and Analysis*
- *Power Noise Mitigation Strategy from RTL Perspective on MTCMOS Design*
- *An Accurate and Efficient SSO/SSN Simulation Methodology for 45nm LPDDR I/O Interface*

Exhibitor Forum

Booth #1562

- *Chip-Package-System (CPS) Co-design/Co-analysis using Chip Power Model (CPM)* by Bhavana Thudi, Apache Design Solutions, on Tuesday, June 15th from 3:15 until 3:50pm
- *Reliability Verification for the Post 45nm Era* by Arvind Shanmugavel, Apache Design Solutions, on Tuesday, June 15th from 3:55 until 4:30pm
- *RTL Design for Power using PowerArtist-XP* by William Ruby, Apache Design Solutions, on Wednesday, June 17th from 1:00 until 1:35pm

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BETTER INNOVATION Nano Makes First Appearance in Canada

7 June 2010

Tata Technologies announced that "BETTER INNOVATION on Tour," will show the Tata Nano, the world's most affordable car, for the first time ever in Canada at the APMA-Auto21 Annual Conference in Windsor, Ontario, June 8-10.

The conference will take place at Caesars Windsor, June 7-10. More than 800 members of Canada's automotive component supply industry and research community are expected to attend. A number of industry-leading speakers, including Hushedar Mehta, Tata Technologies Vice President – Global Services, will appear, providing insight on upcoming automotive innovation and emerging technologies. Mehta will speak on Wednesday, June 9, about Tata Technologies' frugal and sustainability engineering capabilities, using the Tata Nano as an example of those capabilities put to work. The BETTER INNOVATION Nano will remain on display, following his presentation, through the close of the event on Thursday, June 10. Tata Technologies representatives from the company's Windsor, Ontario, Canada headquarters facility will be available to answer questions about Tata Technologies and the Nano throughout the event as well.

Tata Technologies played a key role in engineering the Nano, which is produced by Tata Motors in India, for the Indian market. The company is using the car to highlight its full-vehicle engineering and design capabilities to clients, engineering students and select automotive and engineering media.

BETTER INNOVATION on Tour kicked off in April with visits to client sites in Illinois, Michigan, and a stop at SAE Headquarters in Warrendale, Penn. In May, the tour visited Tata Technologies client Case New Holland, in Illinois, and made a stop on May 14 at "Goodyear Innovation Day," at the Goodyear Innovation Center in Akron, Ohio.

The Nano featured in BETTER INNOVATION on Tour is owned by Tata Technologies and is on loan from its Center for Advanced Engineering and Design in Pune, India. It is the first-ever Nano to be displayed in North America, making its debut at the Tata Technologies BETTER INNOVATION event at the Detroit Science Center in January.

"The innovative thinking that brought the Tata Nano to market is symbolic of what Tata Technologies has to offer the automotive industry," said Warren Harris, Tata Technologies' President and COO. "Tata Technologies was front-and-center in engineering and developing the Nano; working closely with Tata Motors and with a significant number of the Nano project suppliers."

Tata Technologies was involved from concept to launch on the Nano project, working on the concept, advanced engineering, body-in-white, interior, exterior and even playing a role in the innovative approach taken to manufacturing.

Tata Technologies contributed to more than 18 patents on the Nano project, according to Mehta, "Our work on the Nano is part of a sweeping wave of change within the automotive industry – the use of truly global engineering resources."

Follow BETTER INNOVATION on Tour on the BETTER INNOVATION website, http://www.betterinnovation.com, where visitors will find complete listings of tour stops, as well as photo and video galleries of BETTER INNOVATION on Tour events.

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Cimatron, DMG, ISCAR Demonstrate Dramatic Reductions in Machining Times With 5-Axis Technology

10 June 2010

Cimatron Limited announced that its Turkish service provider, Teykaz, partnered with DMG and ISCAR to demonstrate the benefits of 5-Axis Milling.

The two day seminar in Dudullu, Turkey, was hosted by Onaymak, a producer of small series of complex parts and a Cimatron customer. Representatives of about 25 companies attended the seminar, which included presentations and featured the live cutting of a mold insert on a DMU60 monoBLOCK 5-Axis machine.

Using the live cutting as an example, Alon Leuchter, an NC expert at Cimatron, showed how 5-Axis simultaneous milling and positioning had significantly reduced machining time.

"We proved that a finish operation that would have taken about half an hour with a 3-Axis machine could be completed in less than seven minutes on this insert from an automotive industry injection mold," Mr. Leuchter said. "Our customers can expect serious improvements in machining times, and in surface quality, when working with 5-Axis technology powered by CimatronE's flexible CAM programming capabilities."

A video excerpt of the live cutting is available from Cimatron's website, http://www.cimatron.com/Main/pressreleases.aspx?FolderID=68&docID=21054&lang= en

CimatronE offers a versatile and fast 5-Axis CAM system designed to work effectively for tooling and for discrete manufacturing of parts from a wide range of different industries. CimatronE's 5-Axis Solution combines a rich set of machining strategies, strong optimization, machining simulation and flexible 5-Axis post processors, with strong local support of 5-Axis technology.

"Since acquiring our 5-Axis machine and CimatronE, just five months ago, we have seen dramatic improvements in our machining times and surface quality, and we have also been able to win more complex jobs," said Askin Icgudu, of Onaymak.

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Cordys Introduces Greater Flexibility to PLM Systems with BPM and Collaborative Engineering at PTC/USER World Event 2010

8 June 2010

Cordys announced that company executives will present a partner presentation at the **PTC/USER World Event 2010** conference. The session will explore how to achieve seamless data synchronization across heterogeneous partners, processes and Product Lifecycle Management (PLM) products. Case studies of industry leaders who are leveraging dynamic business process management and collaborative engineering to drive operational value and innovation across their global supply chains will be featured. The company will also demonstrate its new Cordys Collaborative Engineering software and host visitors at **booth #617** on the show floor.

Who: Pablo Grodnitzky, Vice President of Global OEM for Cordys and Yaron Rosenbaum, Program

Manager for Collaborative Engineering and General Manager of Israel for Cordys

What: “Many Hands Make Light Work - Data Synchronization in a Heterogeneous World”

When: Monday, June 7, 5:15pm - 6:00pm

Where: Panzacola, H2, Rosen Shingle Creek Hotel, Orlando, FL

The PTC/USER World Event 2010, to be held June 6-9, is the premier conference for professionals who use PTC products and services. The new Cordys Collaborative Engineering software offering provides users of PLM systems, such as PTC, with:

Greater control over inter-enterprise “airgaps” - such as between civilian enterprise and military data security, audit and process requirements

Greater inter-PLM system synchronization scalability over typically highly-customized PLM systems

The ability to create their own composite applications - such as with business process management, bill of materials and collaborative engineering requirements

For more information on the PTC/USER World Event 2010 program visit:
http://www.ptcuser.org/2010/agenda.html

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ESI Will Speak at the 6th International Styrian Noise, Vibration and Harshness Congress in Graz, Austria

8 June 2010

The International Styrian Noise, Vibration and Harshness (ISNVH) Congress is the annual European Automotive Noise Conference for **Noise, Vibration and Harshness** (NVH) experts to discuss the possibilities and existing achievements in vehicle NVH. Organized by the Virtual Vehicle Research and Test Center in cooperation with AVL, MAGNA STEYR and the American Society of Automotive Engineers (SAE), the **6th ISNVH Congress** will be held June 9-11, 2010 at the University of Technology in Graz, Austria.

ISNVH-2010 will focus on highly up-to-date topics for car manufacturers, suppliers and customers currently experiencing a tense economic situation. NVH engineers today are facing the challenge of designing lightweight vehicles with acceptable noise and vibration characteristics. In the context of the growing importance of hybrid and electric vehicles, car manufacturers require advanced experimental and simulation applications to evaluate and minimize the resulting NVH early in the design process to benefit from novel materials and arrangements.

ESI will contribute to the congress theme – Sustainable NVH solutions inspired by ecology and economy – by giving a talk on ‘The Effect of Beading on Radiated Noise’. The paper will be presented by Denis Blanchet**,** ESI’s Vibro-Acoustics Engineering Services Manager, on June 10 at 2:15 pm during the *‘Light Weight Design Contra NVH’* session (2).

In the automotive industry there is widespread use of beading to stiffen floor and dash panels. The aim is to reduce vibration levels and simultaneously to reduce radiated noise. While beading has a positive effect close to the first panel mode’s natural frequency, it can also have a negative effect at all other frequencies. For the sake of simplicity, or because of lack of available implemented formulation in their simulation tools, engineers typically assume a radiation efficiency of “1” (one) over the whole frequency

range. This assumption leads to reducing the vibration levels only and can be misleading because the radiation efficiency tends to "1" (one) above coincident frequency but not below it. While increasing stiffness reduces vibration levels, it also increases radiation efficiency and can result in higher levels of radiated noise.

The presentation will compare vehicle panels with uniform cross-section and beaded panels in two different configurations:

- Academic frame and plate case

- Automotive floor

Mr. Blanchet will present vibration levels, radiation efficiency and sound radiated power for all cases. He will also compare different beading types and draw conclusions as to whether these beadings actually reduce radiated noise or not.

We invite delegates to find out more about ESI's Noise, Vibration and Harshness and Vibro-Acoustic solutions by visiting ESI's booth in the exhibition area.

For more immediate information, please visit:
www.esi-group.com/products/nvh-dynamics
www.esi-group.com/products/vibro-acoustics

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ESPRIT 2010 at the 21st Design Engineering & Manufacturing Solutions Expo, Tokyo, Japan, June 23-25

7 June 2010

The latest version of computer-aided-manufacturing (CAM) software created by DP Technology will be exhibited June 23-25, when ESPRIT® 2010 will be featured at the **21st Design Engineering & Manufacturing Solutions Expo in Tokyo, Japan**.

As the largest Japanese machining industry exhibition and conference focusing on information technology solutions, the 21st Design and Engineering & Manufacturing Solutions Expo is a significant resource for those in search of cutting-edge time-saving solutions and techniques.

Attendees of the 21st Design Engineering & Manufacturing Solutions Expo are encouraged to visit the **ESPRIT booth**, where knowledgeable DP representatives will be available to discuss vital upgrades and perform demonstrations of how to best make those upgrades work for them.

ESPRIT 2010 offers dramatic improvements in the support of integrated multi-tasking, mill-turn machine tools. All ESPRIT milling and turning machining capability, from 2-axis turning to 5-axis milling, is available for any type of mill-turn machine tool, including lathes that perform milling, mills that perform turning, Swiss-style machines and other "integrated mill-turn machining centers." In the 2010 release, support for these multi-tasking machine tools has been enhanced through increased flexibility in cutting tool configurations and orientations, enabling the support of a wide variety of machines. The newly added support for additional rotary axes, three or more, allows the ESPRIT customer to completely program and easily simulate the most complex and sophisticated machine tools currently available on the market.

For the ESPRIT wire-EDM customer, the 2010 version includes support for EDM machines with rotary

axes. This allows EDM programmers to perform wire-EDM cutting in 5- and 6-axis using turn-and-burn (indexing the rotary table), and turn-while-burn full 5-axis simultaneous cutting with a rotary table. This new version also provides EDM programming with an innovative new 4-axis pocketing, no-core cutting, machining cycle.

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Geometric to Showcase CAMWorks 2010 at ACMEE 2010

8 June 2010

Geometric Limited announced that it will showcase its leading CAM product, CAMWorks® at **Booth # D-19** at **ACMEE 2010**, that will be held at Chennai Trade Centre, Chennai, India, from June 17-21, 2010.

Technical experts from Geometric and its reseller, CAM Technologies, will be available at the booth to answer queries from visitors and demonstrate the new features of CAMWorks 2010.

“CAMWorks 2010 has a number of intelligent features to address the component manufacturing challenges in Indian manufacturing industry. CAMWorks is based on the latest machining concepts, which helps the new users to adapt well to the increasing demands in quality, productivity, and time to market”, said Sambit Pradhan, Business Development Manager, APAC Region.

The latest release of CAMWorks 2010 includes a number of improvements in multi-axis machining, which enable toolpath generation on increasingly complex part models. New controls have been added to simplify processing of impellers and blisks. Safely entering and retracting from the part has also become more flexible and easier than previous versions.

In addition, other features enable the NC programmer to machine parts faster. The computation for machining time has been modified and updated as well, to provide a more accurate estimate, thereby helping manufactures in costing and process planning. Support for SQL Server Express has been added to improve performance in large scale deployments of CAMWorks.

CAMWorks 2010 supports SolidWorks 2009 and 2010 running under 32- and 64-bit XP, Vista, and Windows 7.

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Intergraph® PV Elite® Webinar on June 23rd to Offer Tips and Tricks for Pressure Vessel Design

10 June 2010

Intergraph has scheduled an Intergraph PV Elite webinar for June 23, 2010, at 12:00 noon CDT that will provide tips and tricks to help engineers and designers improve their PV Elite software skills in designing pressure vessels. Mandeep Singh, senior engineer for the Intergraph CADWorx and Analysis Solutions group and senior developer for Intergraph PV Elite, will lead the webinar.

For information on this webinar, visit http://coade.typepad.com/coadeinsider/2010/06/pv-elite-webinar-june-23rd.html. A webinar registration form is at https://www1.gotomeeting.com/register/790850408.

For more information about Intergraph CADWorx & Analysis Solutions, visit http://www.coade.com.

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Omnify Software Hosts Webinar on RoHS and REACH Compliant Product Design

8 June 2010

WHAT: Environmental Compliance Webinar: RoHS/REACH Compliant Product Design.

Electronics manufacturers are still in need of a simplified way to achieve RoHS (Restriction of Hazardous Substances) and/or REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) compliance while maintaining efficient product development processes. One approach many electronics manufacturers take is to utilize Product Lifecycle Management (PLM) technology in order to automate processes and create a centralized environment for managing all of the information involved in designing their products, including environmental compliance information.

This webinar will demonstrate how Mintera® Corporation, the high performance optical transport systems solutions leader, leverages PLM technology to manage their product design data and easily meet RoHS and REACH compliance. Learn the impact of RoHS and REACH on product design, best practices for tracking compliance data, the importance of documented compliance and helpful tips for managing data to facilitate meeting compliance.

WHO: Rebecca Young-Jones, director of supply chain management for Mintera Corporation, and David Solimini, vice president of technical sales for Omnify Software

WHEN: Wednesday, June 23, 2010, 1:30 P.M. EST

WHERE: Event will be presented online; those interested in attending this event can register online.

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Si2 Announces Member Demonstrations at the Design Automation Conference

7 June 2010

Five companies will be demonstrating significant progress advancing design flow interoperability in the **Silicon Integration Initiative (Si2) Booth #502 at the Design Automation Conference** on June 13-18, at the Anaheim Convention Center in Anaheim, CA. These companies will be showing how Si2 standards developed by the OpenAccess Coalition, the Low Power Coalition, the Open Modeling Coalition and the Design for Manufacturability Coalition can provide innovative approaches to critical IC design flow issues. An introduction to the new OpenPDK Coalition will also be highlighted. Following are descriptions of each company's demonstrations, as provided by them.

AnaGlobe Technology: will demonstrate GOLF, a production-proven OpenAccess-based layout editor adopted by companies such as TSMC, UMC, VIS, AAT, WINTEK, etc. with more than 200 successful tape-out chips. GOLF features powerful layout editing functions, intuitive GUI, flexible customization and extension with TCL/Perl/Python. It provides a next generation interoperable PCell design environment that covers from PCell design, debugging, testing, to documentation.

Cadence Design Systems: will demonstrate solutions using a number of widely-deployed Si2 standards: OpenAccess, Common Power Format (CPF) and Effective Current Source Modeling (ECSM) as well highlight how OpenPDK meets the industry need for an open standard for PDK development. Hear from experts how you can use these industry-leading solutions from Cadence to address your most challenging advanced-node design problems.

Magma Design Automation: will provide an overview of the Talus® low-power design flow which

provides the “Fastest Path to Silicon.”™ The Talus implementation system has enabled designers to meet the low-power specifications of some of the world’s most advanced handheld devices. With support for the Common Power Format (CPF) and a unified datamodel architecture, Talus allows designers to implement advanced low-power design techniques throughout the flow and to significantly reduce turnaround time.

Pulsic: will be demonstrating UniRoute, the most advanced, production proven, shape based routing solution for extreme custom design automation on OpenAccess designs. See how UniRoute’s Spine and Stitch routing capability has been deployed to significantly increase productivity in custom layout compared to using legacy routers on leading edge OpenAccess based designs. Learn how to achieve successful tapeouts at advanced process nodes. See why UniRoute is the router of choice for extreme custom design automation with memory, FPGA, and analog/mixed signal customers at advanced process nodes of 45nm and below.

Synopsys: will demonstrate Custom Designer: Learn about Custom Designer's enhanced custom IC layout capabilities, including SmartDRD technology for design-rule-driven layout with automated DRC violation repair, bus routing and schematic-driven layout (SDL). Custom Designer's seamless integration with IC Compiler, IC Validator and StarRC Custom will also be demonstrated.

The Annual Si2 Open Meeting will be held on June 14 from 6-7:30 PM in the Anaheim Convention Center, Room #203A. You do not have to be a member to attend the meeting. Further information and registration information can be found at: http://www.si2.org/?page=1192.

Other Si2 DAC events include the “Advances in Process Design Kits Workshop” and the “Design for Manufacturability Coalition Workshop - "A New Era for DFM". All events are free of charge, and more information with agendas can be found at: http://www.si2.org/?page=11.

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SPESA Expo 2010 Draws Strong Attendance from the Americas and Beyond

9 June 2010

The Sewn Products Equipment & Suppliers of the Americas (SPESA) announced that more than 8000 industry executives and professionals attended its May 18-20 SPESA EXPO 2010 in Atlanta, Georgia. Many of the visitors to SPESA EXPO also attended the co-located Techtextil North America and returned to both events over the three-day Textile and Sewn Products Industry Week event. 85% of attendees classified themselves as buying decision makers or influencers, including the more than 2800 business owners, presidents, and C-level executives in attendance.

“We are pleased to see such an impressive industry response to our 2010 event”, stated SPESA President Benton Gardner. “The signs of economic and industry recovery were evident with the greater than expected turnout of U.S.-based companies and the increased levels of top decision makers in attendance. Virtually all of our exhibitors reported that the show met or exceeded their expectations.”

On the SPESA EXPO tradeshow floor, 224 exhibitors represented several sectors of the fashion and sewn products industry from a broad range of machinery and equipment, fabrics and trims, product development services, production and supply chain services, IT and software solutions. Special new Supply Chain USA, Supply Chain of the Americas, and IT Showcase exhibits were popular destinations for a majority of the attendees. Also 1,000 visitors participated in the 30 SPESA EXPO FORUM conference and seminar events.

According to Gerber Technology VP of Global Sales Sam Simpson, “SPESA EXPO met our expectations. We had good representation from East and Mid-West regions of North America along with good representation from Mexico, Brazil, Ecuador, El Salvador, and Honduras. Gerber was pleased with the good quality level of customers with serious interests.”

Lectra President Roy Shurling’s analysis of the show was that, “The quality of contacts is better than we had hoped for. We met with a lot of corporate vice presidents and decision makers. People seem more confident now, and they’re going back to a growth mode.”

Lonny Schwartz, President of Superior Sewing Machine & Supply added, “Superior had a wonderful show. We were visited by customers from around the Americas and even a few from Europe. We also were able to meet many of our suppliers from around the globe and even found some new ones.”

Jim Hopkins of Hamrick Mills stressed, “In terms of steady traffic through our booth, we were busier at SPESA EXPO 2010 than we have been at any trade show in 25 years. We saw a number of current customers as well as very promising prospects.”

More than 80% of attendees were from companies based in North America, many with additional operations in Central America. South America accounted for nearly 8% of total attendees, while Asia contributed 6%. Apparel companies made up more than one-third of all attendees. Other sewn products segments that contributed significantly to the strong overall attendance included government and military products, technical textiles and composites, upholstered furniture, medical products, luggage and bags, automotive interiors, mattress and bedding, and sporting goods.

Looking forward, SPESA and Messe Frankfurt USA will co-operate, co-produce, and co-launch the new Texprocess Americas tradeshow April 24-26, 2012 in Atlanta. Texprocess Americas will incorporate SPESA EXPO to bring to the Americas the largest and best sewn products and equipment trade show of its kind. Texprocess Americas will take place every even-numbered year alongside Techtextil North America to create a larger, more attractive, must-attend event for all individuals involved with technical textiles, nonwovens, and the sewn products industry.

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Zuken Leverages Aerospace Capabilities at Aero Engineering 2010

8 June 2010

Zuken will exhibit at the Aero Engineering Fair & Congress in both the UK and America during September and November, as the company leverages its experience and capabilities in electronic and electrical engineering within the industry.

"Zuken has many years of experience working with companies in the aerospace industry especially from an electronics design perspective. In recent years we have integrated electrical design into our solution as well. In the aerospace industry, the demand for optimizing the electrical and electronic design process continues to expand. Competitive forces are driving aerospace companies to become more efficient and leaner. This is where our engineering solutions fit in," said Dave Gullickson, general manager of Zuken USA Inc.

Zuken will showcase a portfolio of CAD software that provides an end-to-end engineering solution for the aerospace industry. From PCB and system design with CR-5000, to electrical and fluid engineering (including harness and cable design) with E³.series. Bringing all the design and engineering elements together, they will also demonstrate how the company’s DS2 data management solution complements

the design process.

During these events, Zuken will focus on system-level design including electrical and electronic design, managing the change process, test and manufacturability, and documentation for the complete lifecycle.

For more information about Zuken's involvement at Aero Engineering visit www.zuken.com/event-aero

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Financial News

PTC Updates Q3 and FY'10 Revenue Targets, Maintains $1.00 EPS Target for FY'10

7 June 2010

PTC updated its revenue guidance for its fiscal Q3 and FY'10 due to the impact of currency fluctuations.

Highlights

Q3 Guidance: Revenue of $230 to $240 million and non-GAAP EPS of $0.14 to $0.20

GAAP EPS of $0.02 to $0.07

Assumes actual weighted average of $1.29 USD / EURO for Q3, down from $1.36 assumption in previous guidance

Impact of lower Fx rates to Q3 revenue: $5 million

FY 2010 Targets: Revenue of $1 billion and non-GAAP EPS of $1.00

GAAP EPS of $0.50

Maintaining license revenue growth target of 35% to 40% year-over-year growth

Non-GAAP operating margin of 16%; GAAP operating margin of 7.5%

Assumes $1.20 USD / EURO in Q4, down from $1.36 assumption in previous guidance

Impact of lower Fx rates to H2'10 revenue: $15 million

The Q3 guidance assumes a non-GAAP tax rate of 23%, a GAAP tax rate of 15% and 119 million diluted shares outstanding. The Q3 non-GAAP guidance excludes approximately $12 million of stock-based compensation expense, $9 million of acquisition-related intangible asset amortization expense and $6 million of related income tax effects.

The FY'10 targets assume a non-GAAP tax rate of 25%, a GAAP tax rate of 17% and 120 million diluted shares outstanding. The FY'10 non-GAAP targets exclude approximately $49 million of stock-based compensation expense, $34 million of acquisition-related intangible asset amortization and $27 million of related income tax effects.

Outlook Commentary

James Heppelmann, president and chief operating officer commented, "There is a lot of momentum in the PLM market and we believe that PTC is gaining significant market share. As the year has progressed, we've seen building strength in our business and on that basis have increased our revenue expectations by more than $50 million and non-GAAP EPS expectations by $0.11 above our initial guidance on a constant currency basis. However, at the same time currency fluctuations have negatively

impacted our FY'10 revenue expectations by more than $30 million and FY'10 non-GAAP EPS expectations by $0.07. We are pleased that the incremental revenue has more than offset the negative currency impact, and we remain $20 million in revenue and $0.04 in non-GAAP EPS ahead of our original guidance at this point."

"We started the year with a 20% license growth target, and subsequently increased that target to 30% after seeing Q1 results and then to 35% to 40% after seeing Q2 results. Given the strength of our pipeline in all regions, we are maintaining our FY'10 license revenue guidance of 35% to 40% growth compared to FY'09, despite the impact of the weakening Euro on our near-term revenue performance," continued Heppelmann. "We remain very optimistic about the market opportunity for PTC and are committed to achieving our goal of a 20% non-GAAP EPS CAGR over the next 5 years."

Neil Moses, chief financial officer, commented, "We are reducing our currency assumptions for Q3 and Q4 from the $1.36 USD/EURO used to establish our previous Q3 and FY'10 guidance. We are now using the actual weighted average rate for Q3 of $1.29 USD/EURO and the current rate of $1.20 USD/EURO for Q4. The impact of this change is to reduce our Q3 revenue guidance by $5 million and to reduce our FY'10 revenue guidance by $15 million. We are maintaining our previous EPS targets for Q3 and FY'10."

"We are also maintaining our non-GAAP operating margin target of 16% for the year," continued Moses, "as we intend to moderate the incremental investments we had planned in our business during H2 to enable us to still meet our $1.00 non-GAAP EPS guidance for the full year. We believe this still allows us to make certain strategic investments, notably, increasing our sales capacity, to continue to position us for a strong FY'11 and to capitalize on our long-term growth opportunity." For FY'10 the GAAP operating margin target is 7.5% and the GAAP EPS target is $0.50.

Investor Update Webcast

PTC is hosting an investor update event in conjunction with its annual PTC User Group conference. The investor update will be webcast.

When: Monday, June 7, 2010 at 2:30 p.m. Eastern Time

Webcast: http://www.ptc.com/for/investors.htm

Replay: To access the replay via webcast, please visit http://www.ptc.com/for/investors.htm.

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Implementation Investments

Agilent Technologies' Device Modeling Software Enables Successful Development of Hua Hong NEC's RF Device Modeling Platform

11 June 2010

Agilent Technologies Inc. announced that China-based Shanghai Hua Hong NEC Electronics Company, Ltd. has successfully used Agilent's Integrated Circuit Characterization and Analysis Program (IC-CAP) software to develop an RF device modeling platform for 0.35µm and 0.18µm RF semiconductor devices.

Hua Hong NEC developed its customized RF modeling platform using the advanced capabilities available in the IC-CAP software. One such capability, GUI Studio, allowed the company to directly

generate well-documented, simplified and intuitive extraction routines that significantly cut time required for a complete modeling process. The resulting RF modeling platform included proprietary de-embedding, RF model extraction techniques, corner simulation setups, and a quality-assurance script. This approach enabled highly accurate modeling of HBTs, inductors, varactors and other 0.35µm and 0.18µm devices, and significantly reduced time-to-market.

Agilent's IC-CAP platform is a flexible device-modeling program that delivers powerful characterization and analysis capabilities. The platform is ideal for today's semiconductor modeling processes for DC and RF applications. IC-CAP provides efficient and accurate extraction of active device and circuit model parameters. The program performs numerous modeling tasks including instrument control, data acquisition, graphical analysis, simulation, and optimization. IC-CAP is used by semiconductor foundries and design houses to characterize foundry processes.

"The major software/platform technology enhancements implemented in the 2009 release of IC-CAP played a critical role in allowing us to develop a highly efficient, customized RF modeling platform," said Xiangming Xu, director of modeling for Hua Hong NEC. "The software's high level of customization, for example, provided us with the most efficient path to accurate model extraction. Such enhancements will ensure that we are equipped with the powerful and flexible device modeling platform we need to meet our needs for years to come."

"As the industry standard for DC and RF semiconductor device modeling, IC-CAP provides today's semiconductor foundries and IDMs with the most advanced, customizable modeling software for measurement, simulation, optimization and statistical analysis of semiconductor devices," said Todd Cutler, marketing manager with Agilent's EEsof EDA organization. "We are pleased that this flexible, easily customizable platform has enabled Hua Hong NEC to implement the strategies and techniques necessary to effectively meet its device modeling goals today and in the future."

For more information about the IC-CAP software platform, go to http://www.agilent.com/find/eesof-iccap.

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CJ Cheiljedang Selects Dassault Systèmes V6 to Establish Next Generation R&D System

9 June 2010

Dassault Systèmes (DS) announced that CJ Cheiljedang Corporation, Korea's leading food and biotechnology company, has adopted the ENOVIA V6 solution for portfolio and project management at its four major research and development (R&D) centers – food and food services, feed, biotechnology, and pharmaceutical – and core business departments to reduce time-to-market and improve productivity.

Having taken the lead in Korea's food industry for the past 50 years, CJ Cheiljedang is strengthening its position as the leader in the food, pharmaceutical, biotechnology and animal feed markets in Korea. By adopting Dassault Systèmes' V6 solutions, it aims to maintain this growth momentum to become a global food and biotechnology company.

With ENOVIA V6's PPM (Portfolio and Project Management) solution, CJ Cheiljedang will establish a collaborative environment that is able to store, manage and share created digital data from intellectual property and know-how in the research process. The adoption of ENOVIA will be expanded to the whole process, starting from product information management to virtual shop management.

"As a consumer goods company, we have to address challenges such as short time-to-market and

frequent changes in consumers' taste and trends. Effective management of the R&D process and product information will have a critical impact on cost saving and time-to-market," said Sang Mong Lee, CIO of CJ Cheiljedang. "With Dassault Systèmes' V6, we expect to complete our business innovation project successfully."

ENOVIA V6 offers a new level of collaborative environment for managing and sharing requirements, programs, product portfolios, regulatory compliance, and sourcing in the entire product lifecycle with all users involved in the process. The ENOVIA solution has led the collaborative innovation of global food, biotechnology and pharmaceutical leaders around the world.

"We are delighted that Dassault Systèmes' collaboration solution has been chosen by CJ Cheiljedang. The adoption of this collaboration solution by CJ Cheiljedang will be a driving force of business growth in the food and biotechnology industries of Korea," said YoungBin Cho, managing director, Korea, Dassault Systèmes. "We will support CJ Cheiljedang to accelerate business growth in the global market by enhancing its competitiveness."

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DesignGroup Earns Autodesk BIM Experience Award for Extending Use of Building Information Modeling to Sustainable Design

10 June 2010

Autodesk, Inc. announced that DesignGroup has received an Autodesk BIM Experience Award for extending the use of building information modeling (BIM) to sustainable design, and for the application of a BIM process on more than 40 building projects to date, representing over 4.2-million square feet. The award further recognizes the firm's efforts to promote BIM through presentations, lectures and continuing education seminars for its partners, consultants, clients, local builders, industry groups and universities.

DesignGroup is also being honored for its exemplary use of software for BIM, including Autodesk Revit Architecture, Autodesk 3ds Max Design, Autodesk Ecotect Analysis, (whose active subscribers have access to Autodesk Green Building Studio web-based service), and Autodesk Navisworks.

"At DesignGroup we use a BIM process to digitally develop, visualize, analyze and validate innovative building designs that satisfy our client's goals for energy performance, aesthetics and budget," said Brian Skripac, BIM technology manager for DesignGroup. "We fully leverage both the qualitative and quantitative information in the Revit model to support a BIM workflow within our design teams. We use that same information within the Revit Architecture model in an interoperable format with Ecotect Analysis and Green Building Studio to help give our design teams and clients the analysis they need for solid evidence-based decision making and capital planning."

Exemplary Use of BIM Process on Recent Major Projects

One of DesignGroup's recently built BIM process-based projects is the $5.1-million Grange Insurance Audubon Center located in Columbus, Ohio. Targeted for LEED Silver or potentially Gold Certification, the urban ecology learning center serves as a model for sustainable design and environmental education. DesignGroup and the project's structural engineer used an integrated Revit Architecture–based model for design collaboration, coordination and evaluation of design alternatives and sustainability strategies. For more information on this project, see the Audubon Center customer story.

DesignGroup's other recent BIM process-based projects include the new Hocking College Energy Institute, poised to become Ohio's first LEED Platinum–certified higher education building, and an $85-million new patient tower addition for Butler Health System in Pennsylvania. Both projects featured integrated project teams using the Revit platform for earlier decision making and improved design coordination, with Autodesk Navisworks software applied to the Butler Health System project for cross-discipline clash detection and construction planning. One of the team's current projects, delivered with partner company Energent Solutions, is a study for Nationwide Mutual Insurance Company that will help the company reduce the energy consumption of its corporate headquarters office towers.

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Giken Speeds Up Proposal Preparation and Design Process with Dassault Systèmes' Design Solution

7 June 2010

Dassault Systèmes (DS) announced that Giken has successfully transited its business model from made-to-order to proposal-oriented by deploying Dassault Systèmes' PLM solutions.

In the auto industry, metal prototype production has been decreasing for years and Giken's metal prototype production business was forced to transform to the new business model. While its competitors have moved to quantity production, Giken decided to focus on product planning and proposal-oriented business. It started to improve efficiency in mechanical design and production by using CATIA, and added CATIA for Design which enables it to integrate industrial design process into mechanical design and production process.

With this change, Giken can present the best proposal in a short time to its clients by showing easy-to-understand 3D models designed using CATIA, and satisfy clients' requirements with proper cost and quality.

CATIA for Design includes "Imagine & Shape," which enables intuitive free modelling, similar to making clay models, "Free Sketch Tracer" that integrates 2D sketches quickly to 3D environments, and Real-Time Rendering. These functions enable designers to translate their ideas quickly to 3D models, as well as increase efficiency with smooth data integration from end to end.

"Dassault Systèmes' CATIA is very attractive because it enables us to create ideal models we imagine in a very short time," said Hiroaki Ohsumi, managing director and Design Group leader, Giken K.K. "In the existing process, industry designers draw 2D sketches and then clay models was produced, following which 3D data are produced based on the clay models and simulated to fit the conditions of mechanical design. This resulted in a lot of design adjustment. By utilizing CATIA for Design, we can design and check against requirements simultaneously, reducing design changes and working hours, as well as minimizing cost and time to delivery."

"We are very pleased that Giken has deployed our solutions to tackle their new challenges," said Tomohiko Suetsugu, president, Japan, Dassault Systèmes. "3D modelling includes a lot of information and is easy-to-understand for everyone. This enables us to experience lifelike products in the early stage of design. We expect the demand for 3D use in sales and marketing area to increase very soon."

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McCain Improves Core Business Performance With SAP® For Consumer Products Solution

Portfolio

7 June 2010

McCain Foods Limited, one of Canada's most recognizable global brands and the manufacturer of frozen food products such as french fries, appetizers, pizzas, vegetables, desserts, juices, entrees and oven meals, has selected the SAP® for Consumer Products solution portfolio from SAP AG to help continue its market leadership. By leveraging industry best practices built into the SAP industry solutions, McCain Foods Limited looks to gain end-to-end integration across its enterprise – from supply chain management to financial management – to drive new product innovation.

In business since 1957, McCain has established operations in Canada, the United States, the United Kingdom, Continental Europe and Australia and has developed a strong presence in the emerging economies of China, India, South Africa and South America. The need to replace its legacy systems with comprehensive and flexible business software from SAP reflects McCain's significant global footprint.

McCain selected SAP for Consumer Products, a comprehensive suite of applications from SAP. The solution portfolio is integrated with leading business support and analytical software that enables consumer products companies to optimize key industry processes and achieve business goals, including financial performance management, product innovation and supply chain management.

Learn more about SAP for Consumer Products at www.sap.com.

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Mentor Graphics Design-to-Silicon Solutions Implemented as Part of Samsung Electronics' New 32nm High-K Metal Gate Offering

11 June 2010

Mentor Graphics Corporation announced that the low-power 32nm Hi-K Metal Gate (HKMG) offering from Samsung Electronics Foundry business (Samsung Foundry) includes Mentor Graphics Calibre® design-to-silicon solutions as critical components for both design and manufacturing. Mentor Calibre OPC and Calibre Mask Data Prep products are used in the manufacturing flow, while Calibre Physical Verification and DFM products are part of Samsung Foundry's supported design flow.

"Mentor and Samsung have been collaborating for years on the development and successful deployment of Calibre platform capabilities for both design and manufacturing enablement that provide cost and productivity efficiencies benefiting both Samsung and their foundry customers," said Dr. KM Choi, vice president, System LSI Design Technology, Samsung Electronics. "The benefits of our collaboration and commitment to partnership can be seen in the timely availability of a comprehensive design-to-silicon solution enabling 32nm HKMG technology to be successfully utilized by the fabless design community."

Samsung Foundry and Mentor are providing a comprehensive set of capabilities for gate-first 32 nm HKMG designs based on the Calibre platform, which is the primary signoff environment for Common Platform technologies. The Mentor solution for Samsung Foundry 32 nm HKMG includes Calibre nmDRC and nmLVS for physical verification, Calibre LFD™ for litho variability checking, and Calibre YieldAnalyzer, YieldEnhancer for DFM. Calibre OPC and mask data preparation tools are deployed in the mask data prep flow, enabling accurate litho simulation and correction capabilities and providing fast mask turnaround times.

The Samsung Foundry-Calibre solution is more than a standard foundry reference flow because the joint solution is also used by Samsung System LSI designers in the creation of some of the most advanced high volume products in the industry. The overall flow and the Samsung design kits are constantly validated and updated by Samsung internally so that mutual customers can count on a silicon-proven design flow. Moreover, using the complete Calibre DFM platform and the robust design kits that are part of the Samsung 32nm offering, mutual customers can tune their designs to achieve smoother design ramps at Samsung.

“Samsung is an innovative partner that has helped Mentor continuously extend the Calibre platform to achieve rapid technology development cycle times and industry leading design and manufacturing results,” said Joseph Sawicki, vice president and general manager of the Design-to-Silicon Division at Mentor Graphics. “Our collaboration in design verification, computational lithography and the mask production flow has produced a comprehensive capability for successful design-to-manufacturing handoff. The result is both time-to-market and yield benefits for design companies that take advantage of this new Samsung process technology.”

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Orion Acquires ENOVIA PLM from Technia to Improve Product Launch Performance

9 June 2010

Technia, Addnode’s subsidiary and a leading European supplier of solutions for Product Lifecycle Management (PLM), has signed an agreement with Orion concerning a delivery of a PLM solution based on the ENOVIA PLM system from Dassault Systèmes. The PLM solution will serve more than 1200 users and will enable Orion to shorten the product introduction to reduce the critical time to market for new Pharmaceutical products while ensuring regulatory requirements.

Orion is a European R&D-based pharmaceuticals and diagnostics company with an emphasis on developing medicinal treatments and diagnostic tests for global markets. Orion develops, manufactures and markets human and veterinary pharmaceuticals, active pharmaceutical ingredients as well as diagnostic tests.

“The challenges in the Pharmacy industry are well known: A constant search for new ways to reduce time to market, streamline processes, increase revenues and cut cost whilst at the same time meet regulatory demands. Strategic alliances play a more and more important role, for example strategic alliance with companies that develop your products or carry out clinical trials for you. Our renewed corporate strategy calls for new methods and tools to create competitive advantages. Our thorough evaluation has concluded that Technia and the ENOVIA PLM product will bring new and strategic capabilities for the renewed product management and launch processes at Orion”, says Tiina Pesonen, CIO, Orion Oyj.

“With this order Technia continues to expand its leadership in Product Lifecycle Management for the Life Sciences industry. Technia also enters a new market in this industry – the Pharmaceutical PLM market, which is a strategic step for us”, says Ylva Berg, CEO & President at Technia.

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Purdue Uses MSC Software's SimXpert in Undergraduate Coursework

8 June 2010

MSC.Software announced that it has licensed its SimXpert software to Purdue University in order to improve the Computer Graphics Technology (CGT) Curriculum. Through this partnership, SimXpert is being applied as the core component of simulation in the course, "Industrial Applications of Simulation & Design Visualization". Students are using SimXpert to understand the intrinsic components of computer simulation, as well as various aspects of its applications in a product's lifecycle, so that they may be equipped with the necessary knowledge and skills to become leaders in this area.

"We are pleased with the positive impact SimXpert has made among Purdue students," said Dominic Gallello, President & CEO, MSC.Software. "This course has not only enabled students to extensively utilize digital prototypes to enhance engineering design, but has also helped them to develop communication and project management skills. These are the kind of skills that industry is looking for as companies look to dramatically reduce development time and the number of physical prototypes required."

"The more I see of SimXpert, the more I realize how well it fits my broad, multidisciplinary simulation class. I am very pleased with this product. The students enjoy working with it and appreciate having such a professional quality engineering simulation tool. It is very extensive and powerful, and we plan on its continued use as a key component of our simulation curriculum," said Patrick Connolly, Purdue Professor.

To learn more about how SimXpert is being used at Purdue, please visit:
http://www.mscsoftware.com/Solutions/Success-Stories/Detail.aspx?storyid=133

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Samsung Electronics Achieves First-Pass 32nm Silicon Success Using Synopsys Galaxy Implementation Platform

10 June 2010

Synopsys, Inc. announced that Samsung Electronics' Foundry business (Samsung Foundry) has successfully taped out its first 32-nanometer (nm) system-on-chip (SoC) design using Synopsys' Galaxy(TM) Implementation Platform. Samsung Foundry selected the Galaxy Implementation Platform as one of its implementation solutions for its mobile application processor because the platform's integration enabled them to meet timing while minimizing power consumption and adhering to the tighter design and manufacturing constraints imposed by a 32nm process. In addition, significant productivity benefits were achieved using In-Design Physical Verification. Staying within the cohesive design environment of the Galaxy platform saved time and enabled Samsung Foundry to tape out on schedule.

"Synopsys enabled us to successfully tape out at 32-nanometers on schedule and achieve first-pass silicon success," said Dr. KM Choi, vice president, Design Technology Team, System LSI, Samsung Electronics. "Using the Galaxy Implementation Platform allowed us to develop a scalable flow capable of fully addressing our design challenges. The effective integration of IC Compiler and IC Validator avoided many time-consuming iterations between physical implementation and verification. We have decided to deploy In-Design Physical Verification with IC Validator for all our future IC Compiler-based 32- and 45-nanometer designs."

In-Design technology provides a productivity boost over traditional flows by enabling physical verification during the physical design. The traditional approach of first implementing then verifying the design leads to many iterations between physical verification and implementation, which can result in

significant schedule delays. Synopsys' integration of IC Validator within IC Compiler allowed Samsung Foundry to optimize metal fills that were timing-aware and of signoff quality. The new approach saved time by avoiding unnecessary data transfers and eliminating costly iterations while producing a clean, error-free layout.

Samsung Foundry deployed the Synopsys DC Ultra(TM) synthesis solution with topographical technology and the DesignWare® Library to accurately predict performance of the design during synthesis. The tight integration within the Galaxy platform reduced iterations between synthesis and layout. The IC Compiler MCMM capability was employed by Samsung Foundry to optimize across several scenarios while the Zroute technology within IC Compiler was used to generate DRC clean wires. Samsung Foundry used the PrimeTime® SI timing analysis solution together with accurate extraction from StarRC(TM) to analyze implications of on-chip variation and reduced wire spacing.

"The Galaxy Platform consistently demonstrates the ability to handle the most challenging designs," said Antun Domic, senior vice president and general manager of Synopsys' Implementation Group. "Synopsys leads the effort to enable semiconductor manufacturers to achieve success in production designs at each successive technology node, as shown by the results of our close interaction with Samsung Foundry. Our large investment in R&D and collaborative approach are enabling our customers to achieve first-pass silicon success in such advanced nodes as 32-nanometers. We look forward to continue our collaboration with Samsung Foundry to develop next-generation flows."

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TRI Engineering Deploys Dassault Systèmes' PLM Solutions to Fully Digitize Robot Teaching

7 June 2010

Dassault Systèmes (DS) announced that TRI Engineering has fully digitized its Robot Hemming System, a car parts production system, by deploying Dassault Systèmes' PLM solutions.

The solutions enable TRI Engineering to optimize the whole process in 3D and improve communications with its customers.

In the car manufacturing industry, the demand for 3D data has accelerated, following the auto OEMs. Under these market conditions, TRI Engineering decided to deploy a 3D solution and selected CATIA because of its reputation as a de facto standard in the auto industry. With the aim of expanding 3D use in the future, the company also decided to deploy DELMIA and ENOVIA. This enables it to increase efficiency and product quality by integrating design, analysis, robot motion simulation, and teaching using 3D, and also improving communications with its clients.

"We can see the huge merits of using 3D dynamically," said Takeharu Oka, vice president, Design and Sales, TRI Engineering. "We use 3D for robot motion simulation, presentation for clients and explanation using CAE, which improve communications drastically. We are planning to expand 3D use further for more efficient data management, structural analysis and manufacturing simulation."

"We are very pleased that an ambitious company such as TRI Engineering has selected our PLM solutions," said Tomohiko Suetsugu, president, Japan, Dassault Systèmes. "In the auto industry, our solutions have received a great reputation, but the usage of 3D has expanded beyond design and production as a communication tool. We are committed to continue providing useful solutions for our customers."

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TSMC Includes Apache's Power and Noise Solutions for Reference Flow 11.0 and Analog/Mixed-Signal Reference Flow 1.0

9 June 2010

Apache Design Solutions announced that TSMC includes Apache's PowerArtist, RedHawk, Totem, Sentinel, and PathFinder in both TSMC Reference Flow 11.0 and Analog/Mixed-Signal (AMS) Reference Flow 1.0.

"Our Reference Flows include Apache's complete product line such as PathFinder for full-chip ESD signoff and Totem for analog/mixed-signal power integrity, thus enabling our customers to better manage their power and noise challenges and ensure design success."

TSMC Reference Flow 11.0

Reference Flow 11.0 includes Apache's recently announced ESD integrity solution, PathFinder. In addition, Apache's products for power and noise analysis were validated for Reference Flow 11.0 in the areas of System-in-Package (SiP), 3D-IC with Through Silicon Via (TSV), and RTL power estimation:

•PathFinder™ for full-chip ESD verification supporting human body model (HBM), machine model (MM), and charged device model (CDM)

•Chip Power Model (CPM™) and Chip Thermal Model (CTM) for compact die modeling used in SiP and 3D-IC/TSV analysis

•RedHawk's native support for concurrent analysis of multiple dies with different process technologies

•PowerArtist for RTL to gate–level power estimation and correlation

Advanced process technologies result in smaller wire geometries and thinner gate oxides with lower breakdown voltages, creating ESD related reliability challenges for the designers. PathFinder, a layout-based ESD integrity solution provides full-chip placement and connectivity verification for ESD events such as HBM, MM, and CDM. TSMC's Reference Flow includes one of PathFinder's capabilities to compute the impedance in the discharge path through distributed power/ground and package mesh, as well as the participating clamp cells. Its support includes various pads/bumps and clamp circuit configurations.

The drive to reduce power and increase performance demands advanced packaging technologies such as SiP and 3D-IC/TSV. However, these technologies pose major power, thermal, and stress challenges due to the coupling of power delivery network between digital and analog dies and their heat transfer properties. RedHawk and Totem generate CPM and CTM as hand-off compact models representing the die power and thermal behaviors. In addition, RedHawk and Sentinel are extended to utilize CPM and CTM for multi-die chip-package analysis. For shared power/ground network with TSV structures, RedHawk is architected to handle concurrent simulation of multiple die with different process technologies. Its GUI enables probing across multiple dies to accurately analyze the impact of power supply noise.

The requirement for power reduction is driving the need for power estimation at early design stages, as well as accurate correlation between RTL and gate-level implementation. PowerArtist enables designers to uncover power bugs, which result in excessive wasted power in both stand-by and active modes. PowerArtist provides accurate power calculation based on advanced capacitance estimation technology.

In TSMC Reference Flow, the RTL power estimate is correlated with synthesized gate-level result. In addition, PowerArtist help guide RedHawk for early power analysis and CPM generation.

TSMC AMS Reference Flow 1.0

AMS Reference Flow 1.0 includes Apache's Totem platform, a power, noise, and reliability solution for analog, mixed-signal, memory, and high-speed I/O designs. In the Reference Flow, Totem is selected for early power/ground (P/G) grid integrity check, static and dynamic IR drop signoff, electro-migration (EM) validation, and chip power model (CPM™) generation of full custom designs.

"Advanced designs such as ultra low power and 3DIC/TSV are raising new challenges in the area of power and noise. Chip failures due to the noise margin reduction, ESD effects, and mixed-signal designs are having significant impact on silicon yield," said Tom Quan, deputy director of design methodology and service marketing at TSMC. "Our Reference Flows include Apache's complete product line such as PathFinder for full-chip ESD signoff and Totem for analog/mixed-signal power integrity, thus enabling our customers to better manage their power and noise challenges and ensure design success."

"Our advanced technology solutions require tighter relationships with our foundry partners. Products targeting emerging challenges such as ESD verification depend on manufacturing process and technology information," said Dian Yang, senior vice president of product management at Apache. "Our close collaboration with TSMC enables us to deliver tools and methodologies for our customers that address the latest design challenges."

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UMC Adopts Magma's SiliconSmart ACE for Standard Cell and I/O Cell Characterization and Modeling

9 June 2010

Magma® Design Automation announced that UMC has standardized on SiliconSmart ACE for standard cell and I/O cell characterization and modeling. UMC conducted a thorough evaluation of multiple IP characterization tools from leading electronic design automation (EDA) vendors. SiliconSmart ACE was shown to meet the accuracy, throughput and quality of results UMC required. Magma's world-class technical support was also influential in UMC's decision to standardize on SiliconSmart ACE.

The benchmark used the latest UMC process technology and took a complete library from transistor-level description through SPICE simulation and model generation. The created libraries were further validated to ensure a seamless fit in UMC's advanced methodology and flow. Leveraging the embedded FineSim™ SPICE simulator, SiliconSmart ACE delivered fast throughput, accurate models and advanced library validation capabilities.

"As we move toward 28-nanometer process technology, having a fast, accurate characterization and modeling methodology is more important than ever," said Stephen Fu, division director, IP Development and Design Support Division at UMC. "Through the benchmark process, we determined that SiliconSmart ACE's capabilities and product roadmap more than meet our current and future characterization and simulation requirements."

"By embedding the ultra-fast FineSim simulator and leveraging Magma's proprietary optimization technology, SiliconSmart ACE provides fast, accurate timing, power and noise characterization and modeling," said Anirudh Devgan, general manager of Magma's Custom Design Business Unit. "The results of this benchmark and UMC's decision to standardize on SiliconSmart ACE for development of

IP once again demonstrate Magma's leadership position in the IP characterization market."

Magma will demonstrate SiliconSmart ACE and its entire line of chip design software in **Booth 602** at **the 47th Design Automation Conference (DAC) June 14-16** at the Anaheim Convention Center in Anaheim. For information about Magma's activities at DAC, visit http://www.magma-da.com/DAC2010.

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Product News

Answerthink's Industrial Machinery and Components Solution Receives SAP Qualification

8 June 2010

Answerthink, a division of The Hackett Group, Inc. and a developer, provider, and supporter of SAP(R) solutions, announced that its EzIMC™ offering for the industrial machinery and components industry is now a qualified SAPBusiness All-in-One partner solution. The solution includes functionality specifically for growing and mid-market companies within this industry.

Answerthink's EzIMC supports the entire business value chain from design to service, including product life cycle management, order-to-cash management, supply chain planning and execution, engineer to order, make to order and/or make to stock strategies, procure to pay process, service management and financial management. The package is a completely preconfigured, documented, industry-specific, and ready-to-run version of the SAP ERP application combined with SAP Best Practices offerings and Answerthink's expertise with industrial machinery and components companies.

"EzIMC was developed to meet the complex challenges facing industrial manufacturers today," said Steve Brawner, senior director in charge of EzIMC solution development at Answerthink. "Special emphasis was placed on the solution to support multi-mode manufacturers, allowing these organizations to greatly streamline production operations, leverage partner relationships and improve customer service levels."

SAP Business All-in-One solutions are qualified by SAP and developed, sold, and supported by SAP channel partners as a defined-scope implementation with consulting services. These solutions offer the flexibility to accommodate the unique business needs of each customer. Small and mid-size companies typically have revenues under $500 million and require cost-effective solutions that can be up and running quickly. These companies benefit greatly from the industry best practices and business-specific solution expertise that SAP and partners like Answerthink provide.

"We are excited to build on the success of our qualified SAP Business All-In-One partner solutions with the release of EzIMC," said John McGrath, managing director, SAP Solutions Group, Answerthink. "Through our EzLifeScience™, EzDistribution™, EzServices Provider™ and EzCPG™ solutions, we have demonstrated that an SAP solution is within the reach of a mid-market customer base who might not normally evaluate an SAP solution. With our newly qualified SAP Business All-In-One partner solution, we aim to take our extensive knowledge and skills to serve customers in this market segment."

Answerthink is a strategic business and technology consulting firm that enables companies to achieve world-class business performance. The newest qualification of the EzlMC industrial machinery and components solution adds to a family of solutions provided by Answerthink for industries including life sciences, consumer products, wholesale distribution, and service providers.

In addition to support of SAP software, Answerthink offers a broad array of implementation services designed to enable clients to achieve world-class business performance and maximize the return on technology investments.

About The Hackett Group, Inc.

The Hackett Group, a global strategic advisory firm, is a leader in best practice advisory, benchmarking, and transformation consulting services including strategy and operations, working capital management, and globalization advice. Through its REL group, The Hackett Group offers working capital solutions focused on delivering significant cash flow improvements. Through its Archstone Consulting group, The Hackett Group offers Strategy & Operations in the Consumer and Industrial Products, Pharmaceutical, Manufacturing and Financial Services industry sectors. Through its Hackett Technology Solutions group, The Hackett Group offers business application consulting services that help maximize returns on IT investments. The Hackett Group has worked with 2,700 major corporations and government agencies, including 97% of the Dow Jones Industrials, 73% of the Fortune 100, 73% of the DAX 30 and 50% of the FTSE 100.

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aPriori Announces Availability of New Progressive Die Costing Module

7 June 2010

aPriori, the global leader in Product Cost Management, announced a significant upgrade to the currently shipping aPriori 2010 product release. This new version includes a substantial number of additions to the baseline cost models available with aPriori, and also includes two brand new products: a Progressive Die manufacturing process module and the Cost Data Loader.

Following a mere 4 months after the major release of the aPriori 2010 product in late January, this new version of software underscores the company's commitment to bringing new products to market as fast as possible. "By providing our customers with the broadest suite of manufacturing cost models, we are further increasing the significant financial impact aPriori can have on our customer's operations", said aPriori President & CEO Stephanie Feraday. "We have found that after an initial deployment of aPriori, our customers want to broaden their deployments not just in terms of the quantity of engineers and supply chain specialists working with the product, but also across the number of manufacturing commodities that they can cost."

aPriori is a critical component to many leading manufacturers cost control and cost reduction strategies as it helps identify opportunities for cost reduction and provides cost insight at any time during a product's lifecycle. aPriori is used by engineering groups to evaluate design tradeoffs and quantify the cost of incremental features during NPI and VAVE projects, while savvy sourcing agents generate should costs with detailed manufacturing and cost information to support fact-based negotiation. Customer feedback to the new release has been extremely positive. Key highlights of aPriori 2010 r1.1 product release include:

- **Progressive Die cost model** – As part of the company's continuing commitment to implement new cost models for the widest range of discrete manufacturing processes possible, aPriori is pleased to introduce the new Progressive Die process module.

For companies that make a high volume of thin sheetmetal parts, this new capability will enable them to evaluate the cost associated with the different types of tradeoff decisions they make every day, including design changes, material changes, supplier evaluation, and many others.

- **Machining** - Baseline cost models have been added to the recently released Turning process module to support cylindrical grinding and rotor grinding. Furthermore, support has been implemented for costing the machining of helical grooves, such as those found on rotor flutes, tool flutes, and worm gears.

- **Cost Data Loader** - aPriori can now provide customers with a Cost Data Loader module to bulk load or import purchased part data. Customers can batch load a group of part numbers and their associated costs. When these parts appear in assemblies, their imported costs will be displayed and used to compute assembly costs.

- **Platform Support** – The aPriori client is now certified to run on Windows 7 / 64-bit machines.

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Automotive Industry Raves About New Time-Domain Acoustic BEM Solver

8 June 2010

The latest version of the simulation platform LMS Virtual.Lab Acoustics integrates a time-domain BEM solver developed by IMACS, a spin-off of the Ecole Polytechnique in France. This back-engine lets acoustic engineers perform realistic simulations very efficiently and gain more insight into a wide variety of acoustic issues including for instance engine injection ticks, tire noise and door slams – important brand aspects for the automotive industry.

Customers like PSA Peugeot Citroën have been using the time-domain BEM solver technology for several years to efficiently perform powertrain-related acoustic simulations. Denis Thenail of PSA explained, "From very early on, PSA has recognized and supported the time-domain acoustic BEM technology developed by IMACS. For several years now, we have been using this solver for powertrain radiation, exterior vehicle acoustics and a variety of other applications. This solver is extremely efficient and robust enough to solve large BEM models -- both from a computation and memory point of view. As such, more cases can be addressed in less time, allowing more iterations to optimize vehicle acoustics. Today, we are glad to benefit from this technology in LMS Virtual.Lab, the simulation platform chosen by PSA."

“The latest Rev 9 release of LMS Virtual.Lab Acoustics is in fact our biggest release in twenty years of development, building on LMS SYSNOISE and the previous releases of LMS Virtual.Lab Acoustics. This new robust time-domain BEM is an excellent solver for users dealing with impulsive or wide frequency noise issues. It is designed to handle the most complex models with the highest fidelity and efficiency levels possible. And it perfectly complements our other top-performing solvers like fast multipole BEM (FMBEM) and the FEM PML (Perfectly Matched Layer) technology added to our classic FEM solvers. Many of our OEM customers appreciate the flexibility of being able to work with either highly efficient FEM or BEM solvers – depending on their needs,” stated Stefaan Goossens, Vice President, Simulation Division, LMS International.

Producing acoustic simulation models with the highest fidelity possible gives engineers a better

understanding of the "why" behind a noise problem and a much better route to actually solving the issue at hand. Solvers are mission-critical "number crunchers" incorporated in the simulation software that work behind the scenes to compute the crucial mathematical calculations and create the best possible model in the least amount of time. Fast solvers that run in hours as opposed to several days add tremendous value to a simulation platform. Powerful and robust solvers like time-domain acoustic BEM are designed to handle multi-frequency issues much more efficiently and with higher fidelity. For engineers who work with simulation software daily, this translates to more iterations within the product development cycle and adds to the product's overall quality.

About IMACS

IMACS is a French research and technology provider with activities centered on scientific computing and mathematical engineering. IMACS originated as a spin-off from the renowned Ecole Polytechnique in Paris, France. Over the past 15 years, IMACS has developed a portfolio of services and specialized products for numerical analysis with a focus on vibro-acoustics and electromagnetic simulation. The company provides its products and services to leading automotive and aerospace companies. For additional information on IMACS, visit http://www.imacs.polytechnique.fr

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Bluebeam Software Debuts Studio for Real-Time Collaboration in PDF

10 June 2010

Today Bluebeam® Software is introducing Studio, a new solution for digitally collaborating on PDF drawings and documents in real-time. Designed specifically for architecture, engineering and construction professionals, Studio is a place to meet, create, collaborate and well...make a little magic.

Through Studio, attendees can chat and post markups to a single copy of a PDF using Bluebeam's industry-standard redlining tools such as clouds, callouts, CAD symbols and measurements. Every chat message and markup is tracked in the Record, a comprehensive list of all session activity, which includes document, page and view information. This allows attendees to click through a Record to not only review comments and markups made by others, but to experience the same view of the PDF as when the comment was made. Additionally, an attendee can follow a partner in real time so his view of the PDF updates as the partner zooms, pans and redlines.

According to Mr. Lee, "Any attendee to a Studio session can markup a PDF file by simply using Bluebeam PDF Revu as a viewer. A fully-licensed version is required to start a session, but anyone else can participate. This makes global collaboration truly accessible."

Studio is a new feature in Bluebeam PDF Revu® 8.5, the latest version of the leading PDF editor for the design and construction industry. It is immediately available for download at www.bluebeam.com/downloads. Attendees at **The American Institute of Architects (AIA) National Convention and Expo** may see a live demonstration of Studio in **Bluebeam's booth #2387**. Bluebeam is exhibiting at the AIA Expo, in its largest trade show booth in company history, now through Saturday, June 12th at the Miami Beach Convention Center.

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Cadence Announces Comprehensive SOI Design Hub

9 June 2010

Cadence Design Systems, Inc. introduced the Cadence® SOI Design Hub, a new Web portal that lowers the barriers to adopting silicon-on-insulator (SOI) technology through comprehensive silicon-proven design enablement solutions and services. The SOI Design Hub is aimed at reducing SOI adoption start-up costs, cutting time to market for SOI intellectual property (IP), and improving design quality.

Cadence has been working with IBM, the leading SOI foundry, and with ARM to deliver methodologies, reference flows, IP access and services for SOI design. This includes the recent delivery of a 45-nanometer SOI SerDes receiver. Cadence also recently announced a joint development agreement with IBM to develop complex IP, including SOI designs, as part of the Cadence open integration platform. Forty-five-nanometer SOI technology offers up to 30 percent performance improvement or 40 percent power reduction when compared to the industry-standard bulk CMOS technology.

The Cadence open integration platform is a key component of the EDA360 vision, which, among other things, helps integrators close the profitability gap by providing new capabilities for IP creation, selection and integration.

“Cadence and IBM have collaborated for several SOI process generations to deliver silicon-proven methodology to our mutual customers,” said Mark Ireland, vice president, Semiconductor Products and Services, IBM. “Providing this proven technology and Cadence services expertise is an excellent way to help customers in adopting SOI technology.”

Through the SOI Design Hub, Cadence now offers three new solutions: An SOI IP porting service, where Cadence Services migrates analog, digital, and mixed-signal IP blocks to an SOI process technology, and delivers a self-contained macro that will integrate smoothly with the target design environment; turnkey design services, where customers can outsource any aspect of their design to the SOI design-experienced Cadence team; and a software-as-a-service (SaaS) offering with a complete do-it-yourself IP porting environment that provides access to a production-proven Cadence design environment within a secure IT infrastructure.

“As adoption of SOI technology continues to grow it is important to have a central point for accessing design enablement tools and IP to accelerate the design cycle and industry adoption,” said John Heinlein, vice president of marketing, ARM, Physical IP division. “The Cadence SOI Design Hub, coupled with ARM physical and processor IP, provides engineers a silicon-proven route for leveraging this advanced technology to deliver high-performance, low-power consumer devices while reducing design risk and cost.”

“We’ve been working diligently with IBM and ARM to make SOI adoption easier for our customers and enable them to benefit from this advanced technology,” said Vishal Kapoor, vice president of product management at Cadence. “The new SOI Design Hub will help realize designs for those interested in leveraging the power and performance benefits of this technology with the solutions and services they need to ensure success.”

“This innovative offering by Cadence provides a range of new options for companies to leverage the power efficiency and integration benefits of SOI technology in their products,” said Horacio Mendez, executive director of the SOI Industry Consortium. “The SOI Design Hub is a significant addition to the SOI design chain for the electronics industry.”

The hub can be found at cadence.com/services/Pages/soi.aspx

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Dassault Systèmes' DELMIA Improves Factory Automation Production Line Efficiency

7 June 2010

Dassault Systèmes (DS) announced the availability of a solution for DELMIA Automation virtual simulation to connect directly to Mitsubishi Electric (MELSEC) Hardware and GX-Simulator. This solution targets the factory automation industry to simulate production lines and machinery controlled by programmable logic controllers (PLCs) on 3D engineering simulation software, with the goal of yielding significant production line efficiency gains.

Dassault Systèmes' DELMIA Automation and Mitsubishi Electric's PLC (known as MELSEC) and GX Simulator software work together so users can virtually simulate the operation of the machine with validation of the operation of the production machinery. By this, they are able to validate machinery in early stages of production line and machinery engineering.

Because customers are able to simulate production operations in the early stages of engineering, they can respond flexibly and swiftly to customer requests for changes during the build process. This solution helps customers reduce engineering costs, as well as improve the quality of the final product.

"Mitsubishi and DS are delivering on our common commitment to provide innovation and value to the market. Started in November 2009, the collaboration between Mitsubishi Electric and DS is now delivering the first of several deliverables to the market," said Patrick Michel, vice president, Solutions and Marketing, DELMIA, Dassault Systèmes. "DS and Mitsubishi Electric will continue their collaboration, especially in the areas of virtual motion control validation."

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D-Cubed 2D DCM AND 3D DCM from Siemens PLM Software Integrated into Sescoi's WorkNC-CAD Hybrid Modeling

8 June 2010

Siemens PLM Software and Sescoi International announced the integration of D-Cubed™ software components from Siemens PLM Software into Sescoi International's new WorkNC-CAD® Hybrid Modeling product.

WorkNC-CAD Hybrid Modeling is optimized for the CAD requirements of manufacturers. Parametric sketching and parametric assembly modeling are powered by the D-Cubed 2D and 3D Dimensional Constraint Manager (2D DCM and 3D DCM) respectively. These solutions are part of Siemens PLM Software's PLM Components portfolio and are licensed under the company's unique open business model. In WorkNC-CAD Hybrid Modeling, new surface design capabilities are tightly integrated with solid modeling functionality. Curves and surfaces can be manipulated, and models repaired, to prepare them for efficient manufacture using Sescoi's WorkNC® automatic 2 to 5-axis CAM software.

Both D-Cubed 2D and 3D DCM components have also been integrated into Sescoi's WorkNC-Wire EDM (Electrical Discharge Machining) application. This product enables manufacturers to rapidly extract cross sections and surface data from the CAD model ready for 2 or 4 axis wire eroding operations.

"The new CAD capabilities launched in WorkNC-CAD Hybrid Modeling and WorkNC-Wire EDM are tuned to the requirements of our WorkNC manufacturing applications," said Bruno Marko, President and CEO of Sescoi International. "As our customers' CAM-oriented parametric design requirements have evolved, the D-Cubed 2D and 3D DCM geometric constraint solvers have coped easily with these ever more demanding applications. Their advanced state of development and market-proven capabilities make the 2D and 3D DCM the most appropriate components to meet our current and future demands."

"We are delighted to see the 2D and 3D DCM applied to the CAM-oriented requirements of Sescoi's CAD offerings, reinforcing their status as by far the most widely used geometric constraint solvers across the CAD, CAM and CAE markets," said Joan Hirsch, vice president, Product Design Solutions, Siemens PLM Software. "The 2D and 3D DCM have a customer base of unrivalled size and diversity stretching back over 20 years. This provides a uniquely sustained and intensive range of drivers for our continuous improvements to the functionality, quality and performance of these market-leading geometric constraint solving components."

Sescoi's software solutions include:

· WorkNC a range of automatic CAM software solutions for 2 to 5-axis milling

· WorkNC Dental, automatic 3 to 5-axis Dental CAD CAM

· WorkNC-CAD Hybrid Modeling, a uniform CAD solution for the entire manufacturing process

· WorkXPlore 3D an advanced, high speed 3D CAD viewer

· WorkPLAN Enterprise, a new generation ERP manufacturing software solution for custom manufacturers

· MyWorkPLAN, cost effective and easy to use job shop software

About PLM Components: Parasolid and D-Cubed

PLM Components are software tools that support innovation and promote interoperability in CAD, CAM, CAE and PLM applications. Siemens PLM Software develops these components, uses them throughout its own applications and licenses them to independent software vendors and end-user organizations. PLM Components include the Parasolid® software and D-Cubed™ software products, widely used technologies that provide 3D part and assembly modeling, editing and interoperability, 2D/3D parametric sketching, motion simulation, collision detection, clearance measurement and visualization functionality. Applications include mechanical CAD, CAM, CAE, mold design, sheet metal, AEC, GIS, structural, plant and ship design, CMM, reverse engineering and sales configuration. For more information, please visit http://www.siemens.com/plm/open.

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Delcam Offers More Accurate Dental CADCAM

10 June 2010

Delcam has released new versions of its DentCAD and DentMILL software for the design and manufacture of dental restorations. The company believes that these latest programs offer higher levels of consistency and accuracy than other dental CADCAM systems. As a result, they can minimise, or even eliminate, manual adjustment of the restoration as it is being fitted, and produce restorations that give improved comfort and that are more durable.

This improved quality has already been seen at dental laboratories that have been testing the new software. Michael Kohnen, Technical Support and Training Leader at Simeda, one of Europe's largest dental manufacturers commented, "Delcam's expertise in the field of engineering CAM means that they have a unique perspective on the dental CADCAM market. The company knows how to make high-quality restoration designs, which I have been able to manufacture to the highest degree of accuracy."

This opinion was supported by Geier Markus from Diadem, which operates an international network of dental laboratories. "Delcam's Dental CADCAM solution offers unprecedented accuracy, which results in restorations that have a high quality of fit every time," he said. "It means that Diadem can maintain the very high standards that dental clinics and dental laboratories have come to expect from us. This is only possible with a strong and reliable CADCAM software partner like Delcam."

As well as improving accuracy, Delcam has increased the range of restorations that can be designed in DentCAD. The new version offers automated tools for the design of inlays and onlays, and for the creation of dental bars, customised abutments, collars and pressed crowns, in addition to the previous options for copings, crowns and bridge frameworks.

The greater accuracy is essential for inlays and onlays to give a good fit with the remaining portion of the natural tooth. If the restoration is oversize, it either has to be ground down manually, which is difficult and time-consuming, or it needs to be re-made. Alternatively, any undersized items are likely to become loose prematurely.

Similarly with dental bars, high precision is important along the full length of the bar, which may need to match as many as six implants. Any inaccuracies will push the teeth out away from the desired position, so affecting the appearance of the treatment and putting unwanted pressure on the jaw.

In the new release, extra analysis tools have been added to DentCAD to ensure that the designs can be manufactured efficiently and will perform satisfactorily. For example, undercut shading can be used to identify areas where five-axis machining might be needed so adding to manufacturing costs, while thickness shading will highlight any areas in the design that might be too thin to give a durable restoration or that might chip or crack during manufacture.

Improvements to DentMILL reflect the recent enhancements to Delcam's PowerMILL engineering CAM system on which it is based. These include support for the latest hardware developments, such as 64-bit operation, multi-threading and background processing, that can significantly reduce calculation times.

A number of improvements have been made to give smoother toolpaths, in particular for five-axis machining. These new techniques not only give a more accurate surface finish on the restoration but also protect the cutters and the machine tool by minimising the stresses during machining. In addition, the range of five-axis machining options has been increased with the option to undertake constant-Z undercut machining.

After its high levels of accuracy, the key benefit of Delcam's dental software is that the programs are extremely easy to use and so are ideally suited, not only to dental technicians that are already using CADCAM, but also to those that have no previous experience of computer-aided design and manufacture. Both DentCAD and DentMILL use dental terminology and imagery to guide the user through the entire design and manufacturing process.

It is expected that many companies will want to use DentCAD alongside DentMILL. However, in keeping with the company's "open" approach to its software, either program can be used with any

combination of scanner, design software, machining software and computer-controlled machine tool.

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Fujitsu Develops World's First Ultrafast 3D CAD Engine

7 June 2010

Fujitsu Limited and iCAD Limited announced the development of the world's first computer aided design (CAD) engine, designed to be used as part of a 3D CAD system for designing machinery that is capable of processing data for one million parts in 0.2 seconds, in Japan.

The new engine features processing performance that is 200 times the speed of existing 3D CAD systems, giving it the power to process large-scale machinery with one million parts in only 0.2 seconds. Although the processing performance limitations of existing systems have traditionally forced engineers to design mechanical, electrical, and control systems using separate systems, the new engine enables the design of these elements to be consolidated into one system, streamlining the task of designing large-scale machinery.

In addition, the ability to share 3D data between departments, from design to manufacturing, prevents wasted effort and information discrepancies that can take place at each stage in the design process, thereby reducing the need for revisions during manufacturing, shortening development lead times, and increasing product quality.

This engine is to be incorporated into iCAD V7, which Fujitsu plans to release at the end of 2010.

Background

In the machinery industry, 3D CAD has become an indispensable tool in the race to bring new, high-quality products to market. But given the massive volumes of data involved in designing large-scale machinery, coupled with limitations on the volumes of data that can be handled, engineers are forced to develop designs using simplified or segmented data. Furthermore, because of increasing data volumes of electrical and control system information including machining and assembly information, mechanical, electrical, and control systems must be designed using separate systems. As a result, when analyzing the consistency of machines as a whole and inspecting the actual equipment, engineers often need to make revisions or extend lead times.

In order to address these issues, Fujitsu has developed a 3D CAD engine that is capable of processing one million parts in 0.2 seconds. In the future, the company plans to incorporate the engine into its new iCAD V7 package.

Engine Features

The method typically used for representing 3D bodies on a computer is to split them into numerous small surfaces that approximate their intended shape. With large machinery, however, this greatly increases the volume of data that needs to be processed.

The new engine employs a new representation method that allows most of the parts of a machine to be precisely represented as mathematical expressions, making it possible to dramatically reduce the amount of memory required. This allows for a 200-fold increase in performance compared with the surface-approximation method.

Handles designs for complex machinery with one million parts.

Machinery can include an extraordinarily large number of parts, exceeding the limits of conventional CAD tools that can only handle tens of thousands of parts. This engine can quickly process extremely large data sets composed of one million parts in only 0.2 seconds, making it possible to design an entire machine, or even relationships between multiple machines, without restrictions.

Handles the design of mechanical, electrical, and control systems within a single system environment

Data volume limitations have traditionally forced designers to use separate systems to design a machine's mechanical components, electrical wiring, and control software. Using this engine, engineers are able to handle these design elements without any data restrictions using a single system, making it possible to control system costs. In addition, by utilizing unified design data to automatically connect wires and check their connections, the engine preemptively prevents oversights in wiring installations and misconnections, reducing the need for revisions during testing and greatly accelerating the testing cycle.

Allows for pre-approval from manufacturing departments even during preliminary conceptual design

It was previously impossible to perform a design review using the 3D data for complex machinery. Instead, representatives from the design and manufacturing departments conducted hands-on testing with the actual machine. The product, which incorporates the new engine, will allow manufacturing departments to review and verify designs using 3D data before the designs are finalized, making it possible to conduct "digital reviews" that detect problems in advance that would otherwise only emerge during manufacturing. Because 3D data for the entire machine is kept consistent throughout the design phase and is shared between design and manufacturing departments, the development lead time can be reduced.

Enhancement of Fujitsu's CAD Business

Fujitsu has recently added to its PLM Business Center, a team to enhance the promotion of CAD products. It has also deployed technical staff to iCAD, which is in charge of product development, who will provide support for business deals involving CAD products. This program, along with approximately 1,000 staff from Fujitsu's offices across Japan and its sales partners in the manufacturing sector, will serve to enhance sales and promotional activities for products based on the new engine (scheduled for the end of 2010).

Sales Target

8,000 units during FY2011 (ending in March 2012).

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Geomagic Releases Studio and Qualify 12: Simple, Integrated and Powerful 3D Software

9 June 2010

Geomagic has released new versions of its 3D software for reverse engineering and quality inspection: Geomagic Studio 12 and Geomagic Qualify 12. The new releases bring ease of use to the market for 3D scanning software, along with new features that improve results and save time.

Simpler, faster, more compatible

Geomagic Studio 12 directly integrates with leading 3D mechanical CAD packages, allowing users to

quickly and easily create parametric CAD models from 3D scan data. Geomagic Qualify 12 includes an entirely new report generation and publishing engine that enables colorized and annotated 3D models to be embedded directly in PDF.

Both applications offer the familiar ribbon-style interface pioneered by Microsoft in Office 2007, support for Windows 7, and optimizations that speed runtime by up to 40 percent.

Geomagic Studio 12 represents a leap forward for Robb Rudluff, design engineer at pHluid, which provides engineering services that speed product development and improve quality for customers such as Quatro Composites, Edwards Lifesciences, Global Motorsports Group (GMG), Yamaha Motor Corp. and others.

“The new ribbon interface makes it simple to access the comprehensive features of Geomagic Studio 12 – they’re all right in front of you in a left-to-right layout,” says Rudluff.

Fastest path from points to CAD

Parametric Exchange – the exclusive Geomagic feature that enables parametric models created in Geomagic Studio to be transferred directly into 3D CAD software – has been significantly upgraded and expanded.

“The ability to automatically trim, join, cut or subtract surfaces and solids in Geomagic Studio’s Parametric Exchange further streamlines the process of turning scan data into fully parametric, native-format CAD models that my customers can put to immediate use,” says Rudluff.

New features in Geomagic Studio 12 that optimize the reverse engineering workflow include:

Automatic surface and solid trimming via Parametric Exchange, leading to faster creation of full-fidelity CAD models.

Enhanced Autosurface capabilities that convert polygon meshes into exact NURBS surfaces with one click.

More flexible workflows to support faster design iterations.

Fast and intuitive hole-filling and improved automatic “healing” of polygon meshes.

Ease of use, groundbreaking reporting

Geomagic Qualify 12 quality inspection software is called a “major step forward” by Rus Emerick, who leads 3D imaging implementation at Schneider Electric, a global specialist in energy management with operations in more than 100 countries and sales of 15.8 billion euros in 2009.

“The grouping of functional commands under tabs and sub-modules in the new GUI provides an efficient, process-oriented workflow,” says Emerick. “The improved Automation Designer enables users to easily create, edit and store a part’s unique verification and inspection process for use on current and future parts, ensuring all versions are inspected in an identical manner.

“But, the real bonus in Qualify 12 is the 3D PDF generator, which places an interactive 3D object in the report, enabling anyone with Adobe Acrobat to view and manipulate it. This capability delivers tremendous collaboration power for quality analysis teams throughout the enterprise.”

Other new features in Geomagic Qualify 12 include *quick feature creation* to speed up the creation of inspection plans and new algorithms for aligning test models with reference models.

Available now

Geomagic Studio and Qualify 12 are available immediately. They ship with both 32- and 64-bit editions on the CD, and support English, German, French, Italian, Spanish, Chinese and Japanese. Visit 12.geomagic.com for more information and to sign up for free trial versions of Geomagic Studio 12 and Geomagic Qualify 12.

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IBM Announces New Offerings to Help Organizations Drive Innovation While Managing Cost and Risk

7 June 2010

At the INNOVATE 2010 conference, IBM announced new software and services that help customers design and deliver the advanced products leading the convergence of mechanical, electronic, and digital technologies.

The convergence of physical assets and IT applications requires a new "systems of systems" approach for integrating products and services. Software-driven innovation across product lines is often challenging if not supported by effective planning, development and collaboration. Best-in-class product and service companies are those that build a strong competency in systems engineering and software development. Organizations of the future—along with their partners and customers— must build the competencies to design, deliver and manage products in smarter ways. IBM is announcing new initiatives to support the design, development and life-cycle integration of products and services:

•**Integrated Product Management Offerings**: A set of IBM software and hardware offerings and best practices from across the IBM and Business Partner organizations that help design, deliver and subsequently manage the lifecycle of increasingly complex offerings, including product planning, software development, software design chain and asset management.

•**Flexible, Affordable Software Development**: As organizations strive to reduce their capital expenditures and operational expenses, new deployment and licensing models can help them meet these goals. IBM is providing new cloud test and development offerings, in both private and public environments. In addition, IBM is offering a new flexible software licensing model designed to reduce license acquisition costs and increase productivity.

•**Support for IBM Industry Frameworks and Customized Solutions**: To support and extend the new Integrated Product Management initiative, and offer customers continual improvement unique to the challenges of their industries, IBM is investing in new best practices, assets and workbenches optimized to specific industry vertical use cases.

"The value, lifecycle and ecosystem of any smart product today are driven by software," said Dr. Daniel Sabbah, IBM Rational general manager. "In order to build an enduring and innovative competency in software delivery, it must be managed as an agile and cost-effective business process within a framework that allows continuous improvements and accommodates change."

Managing the Integrated Product Lifecycle

Integrated Product Management is a new set of capabilities that brings together over 30 IBM offerings including, hardware, software and services helping customers manage the entire product development and integration spectrum. IBM's Integrated Product Management offerings, based on solutions and software from IBM Rational, provide a holistic environment in which to design and deliver software while sustaining competitive differentiation through continuous innovation. Today, software

development and delivery teams are being asked to respond to changes in the marketplace more quickly—but with fewer resources and mounting pressure to deliver more value. IBM can help speed innovation with reduced cost and risk by deploying a flexible environment for software design, development and delivery on multiple platforms.

New Licensing Options Allow Infrastructure Flexibility & Affordability

Software development projects typically use different mixes of products at different times because of changing project usage patterns. As a result, licenses may not be used for a given project as anticipated and therefore end up "sitting on the shelf" for large periods of time during a project lifecycle.

IBM's new token and term licensing models provide instant flexibility, giving customers access to the right software at the right time during a project, without an abundance of shelfware or the hassle of a new PO or evaluation process. With tokens, users can move between products as the capabilities are required without needing to calculate the anticipated number of licenses for each product, taking the guesswork out of product usage. The term license model allows for product usage over a given period of time. Each model adds to the flexibility needed in today's innovative environments.

Licensing options available today included token, floating, term or perpetual licenses. Most organizations will use an effective mix of multiple licensing structures to drive the optimal productivity of their software delivery teams.

Rapid Deployment in the Cloud

As cloud computing brings an array of options to software development, organizations pilot and prove cloud computing models, and provide the tools to extend cloud offerings into production. Today, IBM announced Rational Software Delivery Services for Cloud Computing support for IBM Cloudburst. IBM Cloudburst is a prepackaged and self-contained service delivery platform that can be implemented in a data center to deliver the efficiencies of cloud computing. IBM Rational Software delivery services for cloud computing help leverage the cloud to transform software by providing software development and test solutions across multiple platforms, available for private cloud deployments on the IBM Smart Business Development and Test Cloud and as an offering for IBM Smart Business Development and Test on the IBM Cloud.

Industry Frameworks Help with Competitive Differentiation

In order to solve industry-specific problems and create opportunities for clients to competitively differentiate their products and services, IBM offers Industry Frameworks based on tens of thousands of engagements across the spectrum of sectors and industry categories. These solution platforms deliver the full power of IBM middleware combined with industry standards and best practices. Since these are based on specific usage patterns, they are highly repeatable and help clients create sustainable assets. IBM Rational software is adding new value to these frameworks with software and systems development solutions that leverage the IBM Rational Software Delivery Platform to improve collaboration. Specifically Rational has added products and services into the IBM Insurance Industry Framework, the IBM Banking Industry Framework, the Chemicals and Petroleum Integrated Information Framework, and the Service Provider Delivery Environment Framework.

In order to facilitate innovative software design and management for specific industries, IBM is also unveiling a library of software available at no cost that delivers the building blocks critical for smarter planet projects. The library is called the Integrated Service Management Library and contains 1,800 software accelerators developed by IBM and third parties to help customers create more intelligent

operations in 14 industries including automotive, aerospace and finance. These software connectors help the digital and physical worlds talk to each other to better manage a company's equipment, buildings, IT operations and business services.

Additionally, IBM also announced today its intention to establish an open source project on Eclipse.org for the EGL technology. EGL, a business application programming language created by IBM, is designed for developing portable, cross-platform applications and services that can be deployed to the appropriate runtime environments based on the evolving needs of the business. This is possible because EGL code is not tied to one particular platform, virtual machine, or runtime environment. EGL code compiles into popular languages like Java, JavaScript, and COBOL, which then executes on proven, ubiquitous environments. IBM is helping customers become more agile by facilitating their transition away from costly and aging environments, tools, and languages to a modern language (EGL) and Eclipse-based tool set.

For more information on IBM Rational: http://www-01.ibm.com/software/rational/

For more information on the IBM Innovate Software Conference, visit: http://www-01.ibm.com/software/rational/innovate/?S_CMP=HPHERO&ca=rh

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IC Manage Announces Global Design Data Management for Synopsys' Galaxy Custom Designer Solution

10 June 2010

IC Manage, Inc., a leading provider of project and design data management solutions for the electronics industry, announced the integration of Synopsys' Galaxy Custom Designer® solution and IC Manage Global Design Platform™ (GDP). Engineers can now efficiently manage and share Custom Designer's design data across multiple design sites.

The integration of GDP and Galaxy Custom Designer provides advanced project and design data management capabilities within Custom Designer's familiar user interface, giving design teams version control, configuration and derivative management, as well as design data hand-offs and bug tracking. Designers now have transparent access to complete version and icon-based state notification, fully hierarchical library and cell views, property file auto-check-in/check-out and revision history, resulting in reduced designer overhead and maximum productivity.

"The integration of the IC Manage GDP with Custom Designer further expands the ecosystem of our custom implementation solution and provides more tool choices for our customers," said Bijan Kiani, vice president of Product Marketing at Synopsys. "The openness of Custom Designer is key to driving the growing ecosystem of best-in-class tools that better serves the needs of our mutual customers."

"To achieve maximum design team productivity, customers have long demanded our scalable, reliable, and high-performance design data management capabilities seamlessly integrated into all of their IC design tools and methodology flows," said Shiv Sikand, VP of Engineering for IC Manage. "The IC Manage GDP integration with the Galaxy Custom Designer solution will enable efficient reuse and assembly of design data across local and geographically dispersed design teams."

For more information on the IC Manage GDP integration with Synopsys Galaxy Custom Designer, please visit http://icmanage.com/Design-Data-Management-Synopsys-Custom-Designer.html

About IC Manage Global Design Platform

IC Manage Global Design Platform (ICM GDP) is a next-generation design data management system that efficiently manages, locates and assembles components and delivers reuse across the enterprise. It is the first hardware/firmware/software design data management solution to offer a multidiscipline design assembly, derivative management, real-time worldwide design content delivery, and now enterprise-wide and secure multi-company collaborative design project management environment.

About IC Manage

IC Manage, Inc. provides next generation design management solutions for IC design, enabling companies to efficiently and reliably manage single and multi-site design efforts. IC Manage's Global Design Platform (GDP) - utilizing the Perforce engine - is the first solution to offer design assembly, derivative management and content delivery in addition to scalable, ultra performance revision control, release and configuration management. IC Manage offers IT infrastructure integration for hot backup, high availability and disaster recovery for true 24x7 enterprise availability. IC Manage is headquartered at Suite 100, 15729

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Kubotek Launches KeyMachinist Mill Low-Cost CAM Product

10 June 2010

Kubotek USA announces the launch of a new stand-alone product called KeyMachinist Mill. KeyMachinist Mill is a CAM product that is fully compatible with KeyCreator, Kubotek's 3D direct modeling CAD software. The product comes in both two axis and three axis versions, KeyMachinist Mill 2 and KeyMachinist Mill 3 respectively.

KeyMachinist integrates a wizard-style interface with fast toolpath generation. Exceptional viewing and layer management tools work hand in hand with a multitude of native or imported file types. The base level of KeyMachinist Mill reads files from Solidworks, Pro/E, AutoCAD, Inventor, NX, CATIA 4, KeyCreator, CADKEY, Parasolid, ACIS, IGES, STL, OBJ, and STEP. An extended level is available with the ability to read CATIA 5. The base price for KeyMachinist Mill 2 is $1,295.00 and $2,495.00 for KeyMachinist Mill 3. The product is immediately available to customers in North America.

KeyMachinist Mill functions as a stand-alone product. The same NC capabilities found in KeyMachinst Mill, however, will still be available as an add-on to Kubotek KeyCreator. This versatility will give users the freedom to work with design and manufacturing data easily and productively.

John Wright McCullough, Product Manager, Kubotek USA said "These NC utilities have been available as add-ins to our design products for many years. This is our first stand-alone CAM product. It is based on a robust platform, but we've kept it simple and easy to use."

In addition to the new product announcement, Kubotek is pleased to announce that Marty LoSchiavo has been appointed as manager for the KeyMachinist Center in Rocky Hill, Connecticut. Marty will be focusing his time and energy on sales and support. The KeyMachinist Center in Seattle, Washington will continue to concentrate on the development of the product.

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Luxion Releases KeyShot 2

7 June 2010

Luxion introduced KeyShot 2, the update to the original KeyShot and HyperShot software. The new release features an all new user interface, many new rendering features, and significant performance improvements. It also delivers import of native Pro/ENGINEER data with associative linking on both PC and Mac.

KeyShot 2 is available for immediate purchase. For more information please visit http://www.keyshot.com/keyshot.

KeyShot 2 is an all new application built on Luxion's production-proven interactive realtime raytracing and global illumination technology. Now even faster, KeyShot 2 further breaks down the complexity of creating photographic images from 3D models. With its improved ease of- use, KeyShot 2 gives anybody involved with 3D data the ability to create photographic images in a matter of seconds, independent of the size of the digital model. Available for PC and Mac, KeyShot 2 delivers amazing "shots" without the need for special graphic cards.

KeyShot 2 has been completely redesigned to deliver an unmatched user experience. The new user interface makes the creation of photographic images from 3D data even faster. Key features of the new user interface are:

• Drag and drop import of digital data

• Scene tree for better scene management

• Library for all assets (materials, environments, textures, backplates and renderings) with

drag and drop capabilities

• Interactive material and environment adjustments with realtime feedback

• Dynamic camera interaction with precise position control

• Merging of previously saved scenes with the current scene

New rendering capabilities

The new rendering features in KeysShot 2 allow users to work faster, and obtain even more accurate results than ever before. Key capabilities include:

• Unlimited label placement on any material

• Light emitting materials with intensity, color and appearance control

• Ground caustics without need for a physical plane

Significant performance improvements up to 50%

KeyShot 2 has been further optimized to run even faster on PC and Mac without the need for special graphic cards. Performance improvements reach up to 50% compared to KeyShot and HyperShot. These improvements include:

• Loading of 3D data and saved scenes

• Calculation of detailed and ground shadows

• Image calculation in realtime

• Offline render times

Direct Pro/ENGINEER import with associative linking KeyShot 2 features an all new data import pipeline for Pro/ENGINEER on both PC and Mac.

Unlike before, the importers don't require Pro/ENGINEER to be physically installed, and therefore work much faster. When design changes are being made to the Pro/ENGINEER model, the model can be reimported into KeyShot with losing any of the materials assignment previously made. This will also work with any other supported file format.

Availability

KeyShot 2 is available immediately. All customers who bought KeyShot after April 1, 2010, as well as all customers who have purchased KeyShot for Education will receive the upgrade to KeyShot 2 free of charge. Existing KeyShot and HyperShot customer can upgrade to KeyShot 2 for an incremental fee. All KeyShot customers with subscription will automatically receive the upgrade KeyShot 2. For more information please contact sales@luxion.com.

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Magma and SynTest Integrate DFT into RTL-to-GDSII Design Flow to Increase Designer Productivity

8 June 2010

Magma® Design Automation announced a collaborative effort with MagmaTies Partner SynTest Technologies, Inc., provider of design-for-test (DFT) solutions, to integrate SynTest DFT PRO Plus products into Magma's Talus® RTL-to-GDSII IC design flow. The integration complements Magma's scan-based DFT methodology and mutual customers have validated the flow.

"This fully integrated IC design flow means we can handle large, complex designs through final tapeout with ease, and reduce development cycles," said Josh Lee, president and chief executive officer of Uniquify. "It has clear benefits for designers because it preserves Magma's productivity advantages in verification and low power, as well as in SynTest's strengths in debug, diagnosis and ATE links."

By combining Magma's Talus Design RTL synthesis tool with DFT PRO Plus, design teams have a seamless link between fast, high-capacity logic synthesis and fast turnaround from register transfer level (RTL) through DFT analysis, insertion, test generation and verification. It includes a scan insertion capability using Talus Design, and exhaustive DFT analysis and auto-fix using SynTest TurboCheck-RTL/Gate. The integration adds an IEEE-compliant boundary-scan insertion, as well as memory BIST using SynTest TurboBSD and TurboBist-Memory, respectively. The integration gives design teams using Talus Design a seamless way to connect to SynTest's VirtualScan™ ATPG test-vector compression technologies to generate XtremeCompact™ manufacturing vectors for commercial testers.

"We use Magma's Talus RTL-to-GDSII tools and SynTest's test technology extensively in developing our latest devices," said Jacques Martinella, vice president of engineering of Sigma Designs. "This new tighter integration of SynTest's test technology in the Magma IC design flow will enable us to improve our productivity and turnaround times while providing new capabilities that help us improve the testability of our advanced designs."

For more information on the Magma and SynTest flow, visit **Magma** in **booth 602**, **SynTest** in **booth 522**, or **Uniquify Inc.** in **booth 177** at the **47th Design Automation Conference (DAC), June 14-16** at

the Anaheim Convention Center in Anaheim. For information on Magma's other activities at DAC, visit http://www.magma-da.com/DAC2010.

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Magma's Talus IC Implementation System Supports TSMC 28-nm Process Technology Through Reference Flow 11.0

10 June 2010

Magma® Design Automation Inc. announced that Magma's Talus® and Quartz™ integrated circuit (IC) implementation and physical verification solutions have been included to support the TSMC Reference Flow 11.0. Through TSMC's Open Innovation Platform (OIP), Magma's product suite provides users with new 28-nanometer (nm) design methodology features to address the challenges of low power, performance and design for manufacturability (DFM).

"Magma has worked very closely with TSMC and a number of key customers targeting 28-nm silicon to address the new design challenges presented at that process technology node," said Premal Buch, general manager of Magma's Design Implementation Business Unit. "As a result of this collaborative effort, our customers have already begun successfully taping out test chips targeted for TSMC's 28-nm process. The combination of the Talus and Quartz solutions and TSMC's Reference Flow 11.0 provides faster timing closure on large, tough designs without sacrificing performance or increasing power consumption."

"Our collaboration with Magma and several of our mutual customers has resulted in significant improvements in the manufacturability of nanometer designs," said S.T. Juang, senior director of design infrastructure marketing at TSMC. "Magma's Talus and Quartz have been validated for Reference Flow 11.0 to support TSMC's 28-nm process node, which will benefit our mutual leading-edge customers."

28-nm Design Enablement

Magma's Talus RTL-to-GDSII IC Implementation system supports TSMC 28-nm design rules that have been enhanced in Reference Flow 11.0. Talus' support of Reference Flow 11.0 takes advantage of new power, performance and DFM features, providing customers with faster overall design closure and better performance and predictability. In addition, Magma's Quartz DRC and Quartz LVS physical verification tools support sign-off and in-the-loop physical verification. Quartz DRC and Quartz LVS are official components of TSMC's 65nm Integrated Sign-Off (ISF) Flow and runsets are available from TSMC OnlineSM.

Improved Performance

At 28 nm and below it becomes increasingly complicated to capture the number of potential variations at all process corners. With Reference Flow 11.0, greater performance is achieved using multiple advanced stage-based on-chip variation (OCV) optimization and analysis tables instead of a single advanced OCV table. This analysis technique is available in Tekton™, Magma's new standalone static timing analysis tool, and is also supported by Talus Vortex. This technique can reduce OCV timing margins and improve performance by removing some of the pessimism associated with traditional OCV.

New Low-Power Features

TSMC extends its support for both the Common Power Format (CPF) and Unified Power Format (UPF) in Reference Flow 11.0. Magma fully supports CPF 1.1 and UPF 2.0, providing customers with a

standard format for defining power intent for Talus Power Pro, Magma's low-power optimization technology. Talus Power Pro now supports donut-shaped voltage islands which are a technique for reducing power consumption by varying the voltage in the donut region. Talus Power Pro's industry-leading multiple voltage domain (MVdd) system and dynamic voltage and frequency scaling (DVFS) low-power technique provide customers with maximum performance per watt. These capabilities, combined with Magma's Hydra™ hierarchical design planner, allow customers to design very large, low-power systems on chips without sacrificing performance.

DFM Features for Variation-Aware Design Flow

To address manufacturability and variability issues at 28 nm, Magma fixes lithography hot spots directly in its Talus Vortex place-and-route tool. Utilizing TSMC's iLPC (Interoperable Lithography Process Check) format, markers indicate litho hot spots in the layout that are fixed within the Talus unified IC design environment, avoiding area and timing penalties while providing design-rule-clean layout. An important new capability in Reference Flow 11.0 is timing-driven pattern-based fill and dummy via insertion during routing. This is a requirement for physical designs at 40 nm and below and is provided by Talus qDRC in conjunction with Talus Vortex. Lastly, to manage stress effects, a new design-for-context feature has been added to the Talus Vortex placer that accounts for the effects of transistor layout within cells and their impact on timing. Talus Vortex places incompatible cells further apart during layout to improve manufacturability.

Magma Product Support for TSMC Reference Flow 11.0

Reference Flow 11.0 is supported by Magma's full RTL-to-GDSII suite of tools, which includes:

•Talus Design – physically aware RTL synthesis

•Talus Vortex – DFM-aware physical implementation

•Talus Power Pro – low-power optimization

•Hydra – hierarchical design planning

•Talus qDRC – timing-aware metal fill

•Quartz DRC – sign-off-quality design rule checking

•Tekton – sign-off-quality static timing analysis

More information on Magma's Talus, Hydra, Tekton and Quartz and the TSMC Reference Flow 11 will be available in **Magma's booth 602** and the **TSMC Open Innovation Forum booth 294** at the **47th Design Automation Conference (DAC) June 14-16** at the Anaheim Convention Center in Anaheim, Calif. For more information on Magma's activities at DAC, visit http://www.magma-da.com/DAC2010.

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Mentor Graphics Announces Calibre xACT 3D for Fast and Accurate Extraction Using 3D Field Solver Technology

8 June 2010

Highlights:

- Deterministic field solver provides high accuracy needed for ICs manufactured at 28nm and smaller nodes

- Unique implementation provides turnaround time comparable to less accurate rule-based methods
- Comprehensive production solution fully integrated with Calibre nmLVS and other Calibre tools

Mentor Graphics Corporation announced the Calibre® xACT 3D product for high performance parasitic RC extraction featuring the high accuracy of a deterministic field solver combined with the performance of traditional, rule-based production extraction tools.

“Extraction accuracy is a growing problem at advanced nodes,” said Prasad Subramaniam, vice president of Design Technology at eSilicon. “Designers need extraction accuracy in the 3% range to ensure that their designs will meet target performance requirements, but this accuracy needs to be achieved with tool runtimes that work with aggressive tapeout schedules. These two divergent requirements drive the market need for solutions like Mentor’s Calibre xACT 3D offering.”

“Our customers require reference-level extraction accuracy to ensure realistic simulation of complex devices manufactured at 45nm and beyond,” said Stephen Fu, director of the IPDS division at UMC. “At the same time, they also need an extraction tool that performs significantly faster than existing field solver solutions to maintain fast turnaround time. Calibre xACT 3D meets these requirements by delivering reference-level accuracy with break-through performance compared to other field solvers, and competitive performance compared to more traditional rule- and pattern-based solutions. We are very impressed with this combination of accuracy and performance. In addition, xACT 3D’s full integration with Calibre nmLVS and the overall Calibre flow makes adoption painless for our customers. As a result, we are including Calibre xACT 3D as one of our reference signoff extraction tools both for internal UMC IP development and for use by our foundry customers.”

“Calibre xACT 3D is the first ‘no-compromise’ solution for high-accuracy, transistor-level extraction,” said Joseph Sawicki, vice president and general manager for the Design-to-Silicon division at Mentor Graphics. “With a new architecture that overcomes the performance limitations of traditional field solvers, and full integration into the Calibre physical verification and DFM flow, Calibre xACT 3D delivers reference-level accuracy in a high-performance product that meets the cycle time requirements of our customers.”

Field Solver Accuracy with Rule-Based Performance

The Calibre xACT 3D product solves the traditional dilemma of extraction accuracy versus performance by providing a true field solver extraction solution with error less than 3%, but without the penalty of slow turnaround time. It features a deterministic field solver built on advanced software algorithms to accurately calculate parasitic effects at speeds up to an order of magnitude faster than existing field solvers. Additionally, the Calibre xACT 3D implementation scales linearly, so users can add multiple CPUs to achieve turn-around times that were previously only available with less accurate rule-based methods. The Calibre xACT 3D tool accurately and efficiently models advanced process effects and process variation, and handles both flat and hierarchical designs for full chips, or selected blocks and nets. In contrast to other field solvers that use Monte-Carlo based methods, the Calibre xACT 3D engine employs deterministic techniques that produce consistent results for total and coupling capacitances without the statistical outliers that can be a problem with Monte Carlo approaches.

The Calibre xACT 3D product is a complete extraction solution. It performs device decomposition, geometry pre-processing, parasitic modeling, reduction and net-listing steps, making it completely compatible with existing verification and simulation flows. It works intimately with Calibre nmLVS and includes engines for resistance and (optionally) inductance modeling in addition to the 3D field solver for capacitance. The Calibre xACT 3D product can reuse existing Calibre xRC™ and Calibre nmLVS

rule decks with only minor updates, and it shares the same Calibre results database as other Calibre tools for higher productivity and reliability. It is also integrated with the familiar Calibre layout editor GUI, debugger, and net-listers. Designers can use the Calibre xACT 3D and xRC tools together, loading runs for both tools into the Calibre results database if desired. Because it is also integrated with Calibre DFM tools, such as Calibre LFD and Calibre CMPAnalyzer, the Calibre xACT 3D product can also provide data for variability analysis to account for distortions that occur during the manufacturing process, which further improves modeling accuracy.

Availability

Calibre xACT 3D is available now. For more information, please visit http://www.mentor.com/calibre-xact.

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Mentor Graphics Collaborates with GLOBALFOUNDRIES on Advanced Design and Manufacturing Flow Based on Calibre

11 June 2010

Mentor Graphics Corporation announced that it is working with GLOBALFOUNDRIES to provide mutual customers with a reference flow that addresses the complex verification challenges of IC development at 28nm and below. GLOBALFOUNDRIES' proprietary Library of Yield Detractors Patterns and their innovative DRC+ physical verification flow are now implemented on Mentor's Calibre® platform, which in addition to equation-based verification and comprehensive DFM, now includes pattern matching-based design rule checking capabilities for mutual customers, with support for GUI-based pattern creation and library management enabling custom rule development.

"By working closely with Mentor Graphics to combine our advanced foundry models and process data with Calibre's signoff and DFM capabilities, GLOBALFOUNDRIES DRC+ flow provides our customers with the ability to more quickly release their design to fabrication," said Andy Brotman, vice president of design infrastructure at GLOBALFOUNDRIES. "The new Calibre Pattern Matching product allows us to simplify the specification of advanced DRC and DFM rules, and improve the communication between designers and foundry personnel by moving from a text-based representation of yield-detracting geometries to a pattern-based one. As we all know from personal experience, a picture is worth a thousand words."

"Our experience over multiple nodes in developing tools that represent the manufacturing process to designers has shown us that success depends on close cooperation among foundry, EDA vendor and design teams," said Michael Buehler-Garcia, director of marketing for Calibre design-side products at Mentor Graphics. "DRC+ is based on collaboration that tunes our platform to GLOBALFOUNDRIES' manufacturing process, making it easier and faster for designers to create market-winning ICs on the most advanced processes available."

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Mentor Graphics Underscores Support for OVM and Extends That Support to UVM Across Multiple Products

7 June 2010

Mentor Graphics Corp. announced it will continue to deliver comprehensive support for the Open Verification Methodology (OVM), and is extending that same level of support for the Universal Verification Methodology (UVM). Key technologies that support OVM and have been extended to support UVM include the Questa® advanced verification platform, the Questa Multi-view Verification Components library and the Veloce® emulation platform.

The Questa advanced functional verification platform offers native support for UVM by virtue of its support of the IEEE Std. 1800™ SystemVerilog standard on which UVM is based. This support includes comprehensive language feature support, native single-kernel simulation and full functional debug of SystemVerilog.

The Questa MVC library has added native support for UVM. This allows early adopters of the UVM to access to a comprehensive verification IP (VIP) solution supporting a wide range of industry-standard protocols without the need for any manual conversion, interoperability, or wrapper layers. The Questa MVC library improves verification coverage and helps speed the functional verification of integrated circuits (ICs) using industry-standard protocols. As a result, users of MVCs can expect to see an improved time to market and a higher quality product.

In addition, the Veloce® emulation platform fully supports the UVM. The primary advantage to companies using both the UVM/OVM and the Veloce platform is the ability to use a single transaction-based testbench for both simulation and emulation—two technologies that are critical to the functional verification of large, complex system-on-chip (SoCs) designs.

“From the beginning with the first open-source methodology—the AVM—through the de facto standard OVM, and now with the Accellera UVM effort, Mentor has continually pushed for the goals of verification data portability, verification IP reuse, freely available base class libraries and open source licensing,” said John Lenyo, general manager, Design Verification Technology (DVT) division. “Mentor will continue to enhance our verification product line to incorporate even more OVM and UVM capabilities.”

UVM Based on OVM

The UVM Early Adopter release is based on OVM 2.1.1. It unites the industry around a single standard verification methodology from Accellera. For OVM users who would like to use UVM now, the UVM Early Adopter kit provides a Perl script to automate the change of OVM symbols to UVM in their code to make it ready for UVM.

Availability

OVM is available at http://www.ovmworld.org and UVM is available from Accellera at http://www.accellera.org/activities/vip. For those attending the Design Automation Conference (DAC), June 14 – 16, learn more at the **OVM World booth # 1350**.

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Mentor Graphics Works with TSMC to Speed SoC Verification with Calibre Automatic Waivers

10 June 2010

Mentor Graphics Corporation announced that Taiwan Semiconductor Manufacturing Corporation (TSMC) has completed technical validation of the Calibre® Automatic Waivers solution and is in the process of adopting it to speed verification of large SoCs. The new facility allows TSMC, their IP

ecosystem, and customers to attach design rule checking (DRC) waivers to their IP datasets so that waived violations will not appear during verification runs. This cuts down on DRC debugging as well as unnecessary interactions between the designer and TSMC for previously waived IP, reducing the time to tapeout. Customers have seen an order of magnitude reduction in time required to review false (waived) DRC violations in large SoC designs after adoption of the Calibre Automatic Waivers flow. TSMC is planning to use Calibre Automatic Waivers with TSMC-developed IP.

According to ST Juang, senior director of Design Infrastructure Marketing at TSMC, "This solution allows users to identify and suppress DRC error results in IP if they meet appropriate criteria defined by the foundry. This saves our customers significant debug time, without the risk of accidentally waiving true errors. Unlike previous approaches, the Calibre solution accurately accounts for waivers across cell hierarchies without placing a significant burden on the user."

For example, users at MediaTek Inc. find it is common to have hundreds or thousands of DRC violations in IP at the chip level resulting from design rules that have previously been reviewed and waived by the foundry. The company reports that previously a significant amount of time was spent unnecessarily reviewing each waiver violation simply because there was no efficient way to transfer the waiver information along with the IP when it is incorporated into a design. The Calibre Automatic Waivers solution is now being used by MediaTek to efficiently capturing waivers at the time they are approved, allowing waiver violations to be automatically and accurately removed from DRC results, which significantly reduces debug time.

"Communicating waivers between the design and foundry teams can be a big time sink, and it's easy to inadvertently lose information in the process," said Mark Judiscak, CAD Director at Microchip Technology Inc. "By incorporating waiver information directly into the IP datasets, it becomes available wherever the IP is used. Not only does the designer save debug time that is typically wasted reviewing false DRC violations, but the foundry team also has immediate visibility into exactly which results were waived for a given DRC rule. This greatly expedites communication and resolution of issues."

"Our customers have been asking for a solution to this problem, which is growing as SOC designers make more and more use of external IP in order to add more functionality and speed their time to market," said Joseph Sawicki, vice president and general manager for the design-to-silicon division at Mentor Graphics. "This productivity enhancer is one of the many ways we continue to add value to maintain Calibre's position as the industry's most popular physical verification platform."

About Waivers in IC Design

Typically, a foundry qualifies IP that its customers can use in IC designs to be manufactured at a specific process node. During qualification of the IP, any violations to standard design rules are reviewed, and if it is determined that the structures can be manufactured, certain checks are 'waived' for those specific structures and the particular process. The difficulty is in later tracking the waivers when IP is inserted into an IC design in many places and at multiple levels of the design hierarchy. Often, the waived DRC violations re-emerge and a lot of time is wasted cross-checking each violation to determine if it is a waived error, or a real error.

With the Calibre Automatic Waivers solution, waivers approved by the foundry are included as part of the IP files prior to use by chip designers. The Automatic Waivers facility records the description of waivers on a single reserved GDSII or Oasis layer and automatically associates each waiver with its appropriate check at runtime. Error results associated with a waiver are suppressed if they meet appropriate criteria defined by the foundry. With this new feature, all previously waived results are

properly eliminated regardless of the hierarchical location of the feature. When designers run the Calibre tools, they simply use a command line option to automatically identify and remove waived DRC errors. The Calibre tools also explicitly report the waived errors to create an audit trail. The unique benefit of the Calibre Automatic Waivers solution is that it works seamlessly across cell hierarchies without additional effort on the part of the designer.

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PTC and HP Expand Relationship Through Customer Loyalty Program

7 June 2010

PTC announced that HP has become the newest participating partner in the PTC® Maintenance Support Gold Loyalty Discount Program. In addition to HP, Adobe and Integrated Industrial Information, Inc. (I-Cubed™), a company specializing in the integration and collaboration of enterprise systems, have also joined the program.

The Gold Loyalty Discount Program rewards active maintenance customers with special offers and discounts from a select group of PTC hardware and software partners. Active maintenance customers are automatically enrolled in the free program.

HP, Adobe and I-Cubed join a growing list of partner participants in the program designed to offer customers additional value as part of their investment in PTC Maintenance Support. Participating partners include: CADNexus Inc., Dell Inc., Knovel Corporation, Lenovo Inc. 3Dconnexion, Inc.; Mentor Graphics Corporation; Objet Geometries Ltd.; Virtalis; and Z Corporation.

HP, a PTC Alliance Advantage Partner, has a long-standing relationship with PTC and has integrated PTC Pro/ENGINEER® into the HP Performance Advisor tool (www.hp.com/go/performanceadvisor). HP Performance Advisor gives non-technical users a simple, effective way to keep their HP workstations operating at full potential. Combined, these tools allow PTC Pro/ENGINEER to run optimally on HP workstations. HP offers a wide range of products certified with the latest PTC releases (http://www.ptc.com/partners/hardware/current/support.htm).

PTC's U.S. Gold Loyalty Discount Program customers will have access to special offers found on the HP Small and Medium Business Online Store for HP Workstations and HP Mobile Workstations.

"HP is pleased to be part of the PTC Gold Loyalty Discount Program," said Mike McGrorey, Workstation Segment Marketing Manager. "The HP and PTC relationship allows us to provide PTC customers with innovative hardware and software that is tuned and integrated. This helps ensure solutions that perform well now and in the future."

"Thanks to the close relationships we have with our software and hardware partners, PTC Maintenance Support customers have been taking advantage of the special promotions we connect them to through the Gold Loyalty Discount program," said Anthony DiBona, executive vice president, Global Maintenance Support, PTC. "We are pleased to continue to add new partners to the program that deliver real value to our customers by helping them reduce their expenditures on technology related to PTC products."

PTC Global Maintenance Support provides customers with access to new versions of their software, technical support through global ISO-certified call centers as well as web-based support tools and pro-active, productivity-oriented features such as support email alerts and "live" and recorded technical tips sessions.

All attendees of the PTC/USER World Event in Orlando, Florida June 6 - 9, 2010 are invited to visit the **PTC Gold Loyalty Partner Booth #301**.

For more information please visit: http://www.ptc.com/support/maintenance/gold/

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PTC Extends Windchill PLM Leadership; Unveils Four Microsoft Sharepoint 2010-Based Solutions

7 June 2010

PTC expands Windchill®, its family of PLM solutions, with the announcement of several new and enhanced solutions built on the Microsoft SharePoint® 2010 collaboration platform.

Highlights

Windchill PPMLink™ - A new program portfolio management solution that couples stage-gate methods with unique capabilities to aggregate program and product-related metrics, improving visibility and decision-making

Windchill SocialLink™ - A new solution utilizing social computing capabilities to bring the collective wisdom of communities to bear on product development challenges

Windchill Web Parts for SharePoint - An enhanced solution that consolidates critical information from Windchill and other enterprise systems for presentation in a familiar Microsoft SharePoint 2010 environment for easier, extended information access

Windchill ProductPoint® - An enhanced solution, to address the specific CAD data management needs of small and mid-sized businesses (SMB)

Prior to the launch of Microsoft SharePoint 2010, PTC was invited to participate in Microsoft Corp.'s Technology Adoption Program (TAP) for SharePoint 2010. This provided PTC early access to SharePoint 2010, and was established to yield benefits for product development organizations in the form of enhanced executive visibility, wider-information access, and improved team productivity. Through increased R&D investment and active participation in the SharePoint 2010 TAP, these new PTC solutions are being announced weeks after Microsoft's initial public release of SharePoint 2010.

"PTC believes in Microsoft's vision around the SharePoint 2010 business collaboration platform for the enterprise," said Jared Spataro, director, SharePoint Product Management, Microsoft. "The potential for PTC to deliver great product development solutions for customers, based on the SharePoint platform is demonstrated by the early success of Windchill ProductPoint and the release of these new PTC solutions, offering significant value to manufacturing companies seeking to improve product development processes."

Windchill PPMLink

Windchill PPMLink extends Microsoft's Enterprise Project Management capabilities with configurable stage and gate processes, and scorecards that aggregate traditional project management measurements with PLM-derived product attributes. Further, it allows each project team the freedom to choose its own solution for project management while facilitating comprehensive bottom-up metrics reporting.

Windchill Web Parts for SharePoint

Windchill Web Parts for SharePoint 2010 provides a single, consolidated view of product information

by enabling SharePoint users to easily view, search, and edit Windchill data together with content from ERP, finance and other enterprise applications. Using Microsoft's Business Connectivity Services, Windchill Web Parts for SharePoint 2.0 offers new and enhanced capabilities that expand the current search, assignment, and executive reporting features and take full advantage of the SharePoint environment.

Windchill SocialLink

With Windchill ProductPoint 1.1 and Pro/ENGINEER Wildfire 5.0, PTC first brought social computing features into product development applications. Now, PTC is announcing its development of a dedicated solution, enabling companies of all sizes to realize the value of social product development. Windchill SocialLink will combine social computing enabled by Microsoft SharePoint 2010 with a rich knowledge of product data, and deliver a modern user experience, seamlessly accessible across all PTC solutions. Content tagging, filtering, and activity feeds will automatically disseminate relevant knowledge quickly to product communities and "communities of practices," self-forming groups united by shared professional interests. Uncovering and utilizing the collective wisdom of the crowd will enable faster and more-effective decision-making.

Planned capabilities and associated benefits of this new solution include:

Community provisioning for information sharing and collective problem solving

Dissemination of relevant knowledge to community members intelligently extracted from product content and meta data housed in the Windchill PLM system by way of activity streams

Knowledge and expertise discovery, via personal profiles which are continuously updated based on PLM system usage

Modern, engaging user experience delivered via a social toolbar offering connectivity to all PTC product development solutions

Windchill ProductPoint

Windchill ProductPoint offers CAD vaulting, sharing, visualization, mark-up, and data reuse within heterogeneous environments, typical of SMB product organizations. Additionally, new data loading tools facilitate the direct migration of Pro/INTRALINK 3.x content, including as-stored configurations, metadata and full version history, into Windchill ProductPoint.

"By extending SharePoint 2010, Windchill enables everyone -- design engineers, program managers, and top executives-- to participate in the product development process in a meaningful way through a familiar platform," said Brian Shepherd, executive vice president, product development, PTC. "This results in better, faster decision-making, which can ultimately drive a sustained competitive advantage for our customers."

Availability

PTC is demonstrating these solutions at the PTC/USER World Event 2010, from June 6-9 in Orlando, FL. PTC expects these solutions to be available later this year.

***The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.**

To learn more about these and other PTC products, visit the products pages on www.ptc.com.

Tune in to http://www.ptc.com/events/ptcuser10 for real-time event coverage through videos, pictures,

tweets, and blogs from PTC staff and event attendees. Event-related tweets will be tagged with the #ptcuser10 hashtag. Follow the PTC Windchill product family on Twitter! @PTC_Windchill (http://www.Twitter.com/PTC_Windchill)

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PTC To Release Mathcad® 15.0

7 June 2010

PTC announced Mathcad® 15.0, the latest release of PTC® engineering calculation software. Mathcad 15.0 delivers enhanced capabilities to help customers solve their most pressing engineering calculation needs and improve the documentation of calculations throughout the product development process.

Mathcad 15.0 includes over 25 new functions, more robust reference libraries and integration with third-party tools, including the latest version of Microsoft Excel. Additionally, the Mathcad 15.0 integration with existing engineering platforms like Pro/ENGINEER®, as well as with PTC's Windchill® solutions, Windchill PDMLink® and Windchill ProductPoint®, enables better management of critical engineering content, making it easier to share and reuse information leading to standardization and best practices.

"These design of experiment fitting functions are a great bonus and now that I have augmented them with my own functions they will save many hours of work evaluating large sets of data." - Philip Leitch, PRL Software

Highlights of the enhancements in Mathcad 15.0 include:

Design of Experiments (DoE) - Over 25 new functions to reduce the time and expense of conducting experiments thru DoE by understanding the variable interactions that will influence the experiment. DoE helps identify critical factors and optimal settings for complex processes. It provides templates for a fewer number of experiments which are indispensable when having multiple variables and levels.

Integration to Knovel® Math content - Quickly access the full list of Knovel's fully documented Mathcad worksheets from Roark's and Hick's reference works reducing the time it takes to solve complex math problems.

Integration with Kornucopia® software - Kornucopia by Bodie Technology, is designed to reduce time and effort spent on analysis by providing functions and templates using Mathcad-based documented workflows, that improves interpretations and value of experimental data and simulation results.

Integration to Truenumbers® - Truenumbers by True Engineering Technology enables the ability to easily communicate values across applications and the organization without loss of quantity or unit integrity. Results and values can be moved outside of Mathcad onto different document types - enabling easy sharing of the data

Support for latest version of Microsoft Excel® - Leverage the following functions and features with Excel: READEXCEL(), WRITEEXCEL(), READFILE, the data import wizard, and the Excel Add-in

"PTC continues to view Mathcad as an important component of its overall product offering and remains committed to delivering the best engineering calculation software to our customers,"said Jake Simpson, general manager, Mathcad Business Unit, PTC. "Mathcad 15.0 with its new Design of Experiments functions and integration with Windchill ProductPoint as well as other tools, enables our customers to easily create complex engineering calculations and communicate those calculations across the

organization, thus helping them achieve a level of standardization and collaboration within their product development process."

Mathcad 15.0 Availability

Mathcad 15.0 is planned for availability on June 25, 2010 in all supported languages.

***The timing of any product release, including any features or functionality, is subject to change at PTC's discretion.**

For more information on how to obtain Mathcad 15.0, please visit the Mathcad product pages on www.ptc.com.

Tune in to http://www.ptc.com/events/ptcuser10 for real-time event coverage through videos, pictures, tweets, and blogs from PTC staff and event attendees. Event-related tweets will be tagged with the #ptcuser10 hashtag. Follow the PTC Mathcad product family on Twitter! @PTC_Windchill (http://www.Twitter.com/PTC_Mathcad)

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Synopsys Delivers Comprehensive Design Enablement for TSMC 28-nm Process Technology with Reference Flow 11.0

9 June 2010

Synopsys, Inc. announced that it is delivering comprehensive design enablement for TSMC's 28-nanometer (nm) process technology with TSMC Reference Flow 11.0. New features of the flow include solutions for system-level design and verification, added capabilities for 28-nm design, including In-Design physical verification, and support for thru-silicon via (TSV) technology for 3D IC design. Through Reference Flow 11.0, Synopsys tools and IP enable enhanced productivity, lower power, higher yield and increased performance and integration.

"TSMC and Synopsys have a long history of collaboration on the TSMC Reference Flow," said ST Juang, senior director of design infrastructure marketing at TSMC. "The combination of Synopsys tools and IP with our 28-nanometer design methodology and process technology in Reference Flow 11.0 provides engineers with comprehensive solutions that address manufacturability while enabling design for optimal performance and power consumption. The new technologies in this flow, such as thru-silicon-via and system-level design, bring a new level of advancement to what we offer our mutual customers."

Synopsys has extended Reference Flow 11.0 to support system-to-RTL design and verification. The addition of DesignWare® synthesizable and verification IP solutions for on-chip interconnect fabric, as well as peripheral devices, enables designers to rapidly assemble systems around the AMBA® protocol. Synopsys' Innovator virtual platform tool and the DesignWare System-Level Library models provide an integrated development environment for system on chip (SoC) developers to efficiently create and debug virtual prototypes months before hardware is available, accelerating the delivery of products to market. The system-level solution in Reference Flow 11.0 is connected to RTL through VCS® through VMM methodology, enabling ESL testbenches and IP to be created for virtual prototypes, then reused with SystemVerilog, Verilog or VDHL.

Synopsys Galaxy™ Implementation Platform features complete support for TSMC's latest set of 28-nm design rules in IC Compiler place and route, IC Validator physical verification, and Star-RC parasitic extraction. In-Design Physical Verification with IC Validator is a key new capability in Galaxy, enabling enhanced manufacturing-compliance and accelerated time-to-tapeout. In-Design Physical Verification successfully avoids late-stage surprises common at advanced nodes like 28-nm, by enabling IC Compiler users to do verification during physical design, assuring a manufacturing-clean design at signoff. Automatic DRC Repair enabled by the IC Compiler, IC Validator combination provides an order of magnitude improvement over manual fixing of late-stage DRC errors.

The Eclypse™ Low Power Solution includes enhanced hierarchical low power flow support with the IEEE 1801™ (UPF) standard. Additionally, the implementation platform now offers power management and power constraint rules. VCS with MVSIM and MVRC provide accurate simulation and static verification of designs with multi-rail macros, analog IP blocks and designs with complex power control architectures.

The addition of TSV support for 3D IC design to Reference Flow 11.0 provides emerging technology that complements conventional transistor scaling, allowing multiple silicon dice to be stacked and integrated in a single package. Synopsys has collaborated with TSMC in establishing a 3D stacked IC design flow that supports the vertical integration of multiple silicon dice through all stages of design, implementation, analysis and signoff.

"We've worked closely with TSMC to ensure that our design and verification platforms, as well as our low power and manufacturing compliance technologies address complex design requirements," said Rich Goldman, vice president of corporate marketing and strategic alliances at Synopsys. "The integration of enhanced system-level design and verification capabilities, IP and 3D IC technology offers our mutual customers an optimized path to achieve their 28-nanometer SoC design goals."

About Synopsys Support for TSMC Reference Flow 11.0

TSMC Reference Flow 11.0 comprises a comprehensive set of Synopsys system-level, design implementation and verification tools, and IP including:

System-Level Design and AMBA Interconnect Flow

-- Innovator and DesignWare System-Level Library for virtual prototyping and power/performance analysis
-- DesignWare IP and Verification IP for the AMBA Interconnect provides infrastructure and fabric components for AMBA 2.0 and AMBA 3 AXI™. Automated assembly of the IP using coreAssembler tool.

Verification

-- CustomSim™ and HSPICE® circuit simulation with TSMC 28-nm model support
-- VCS with MVSIM voltage-aware simulation
-- MVRC low power static checking
-- ESL verification using VCS with VMM 1.2

Physical Implementation

-- IC Compiler place and route, including Zroute technology and dummy via insertion
-- IC Validator DRC/LVS In-Design physical verification and sign-off
-- PrimeRail In-Design power network analysis including VCMP-aware IR-drop/EM analysis
-- TSV-aware floorplanning, placement and front/back side RDL routing
-- TSV-aware DRC/LVS physical verification

RTL Synthesis and Test

-- DC Ultra™ and Design Compiler Graphical RTL synthesis including Topographical technology and congestion optimization
-- DesignWare Library datapath IP
-- Power Compiler™ power optimization and multi-voltage power management
-- Formality® equivalence checking
-- DFTMAX™ compression for test cost reduction
-- TetraMAX® automatic test pattern generation (ATPG)

A**nalysis and Sign-off**

-- PrimeTime static timing analysis including advanced stage-based OCV and cell context effect analysis
-- StarRC parasitic extraction with feature-scale VCMP, eDRAM tall contact, via-etch and trench contact modeling support
-- PrimeYield LCC for automatic lithography-hotspot and pattern-match detection and fixing, and TSMC iLPC format support
-- TSV-aware parasitic extraction, timing, IR-drop analysis

Synopsys Professional Services is a global member of TSMC's Design Center Alliance, providing expertise in chip implementation and flow deployment with Reference Flow 11.0. TSMC Nexsys Standard Cells and I/Os are available to DesignWare Library licensees at no additional cost.

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VX Corporation Releases Version 14.4

9 June 2010

VX Corporation announced the release of VX Version 14.4. This release improves overall product performance and adds customer driven enhancements.

One reason customers buy VX is to streamline design through manufacturing. The new cosmetic external thread feature in Version 14.4 contributes to this objective. External threads contain accurate engineering data for proper detailing.

To support the growth in 3D printing, VX offers its users some unique STL tools. One of these new tools, the STL export, can automatically close an open shape. This is important for customers working with imported or scan data. With Version 14.4, users will now have the ability to convert meshes to surface patches. This allows access to the full set of modeling commands to fix spikes, twists, inverted triangles and openings. Users can now repair STL files without having to purchase an expensive editor.

Customers with a valid update contract can download and install this update from support.vx.com. Customers running older versions of VX (VX 2008 V13.xx and earlier) can purchase an update to V14 from the VX web store or from their local reseller. Go to http://www.vx.com/store.

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