

## Contents

<b>Top Story</b>	<b>2</b>
PTC Releases Windchill 10.0	2
<b>Acquisitions</b>	<b>4</b>
PTC to Unify Management of Product Hardware and Software Development Lifecycles with Acquisition of MKS	4
<b>CIMdata News</b>	<b>7</b>
CIMdata in the News: “Siemens PLM Software Celebrates a Decade at Top of cPDM Ranking”	7
CIMdata Successfully Concludes its 2011 North American Vendor Forum and Releases Its 2010 PLM Market Analysis	7
<b>Company News</b>	<b>8</b>
AB Studio Named Autodesk Gold Partner and Receives an Autodesk 2010 Award	8
CAD Schroer Announces Downloads up by 46% for Free 2D/3D CAD Software for Linux®, Windows®	9
CD-adapco Announces the Opening of its New Southern California Office	10
Delcam Announces First Sales Partner in Kingdom of Saudi Arabia	10
Delcam Appoints Martin Measures as its Sales Manager	11
Geometric Announces Appointment of Manu Parpia, Founder and Vice Chairman, as Managing Director and CEO	11
PROSTEP Publishes White Paper on Neutral 3D Formats	12
Rand Worldwide Offers their Dassault Systèmes Customers Technical Support Services through Partnership with Razorleaf	13
Tata Technologies Forms New Vehicle Development Group	13
<b>Events News</b>	<b>14</b>
Boothroyd Dewhurst to Host 2011 International Forum on DFMA, “Manufacture Success: Meeting the Challenge of Growth in Product Development”	14
Call for Abstracts - PDT Europe 2011	17
Carestream Health, Nexteer Automotive, Advatech Pacific to Present on PLM Strategy at Aras Conference at End of April	18
CD-adapco’s STAR European Conference 2011 an Engineering Success	19
CNC Software, Inc. Showcases Mastercam® X5, Unveils New Swiss Software at OrthoTec 2011	20
Delcam to Highlight Integrated Machining and Inspection at Paris Air Show	21
Delcam to Highlight Integrated Machining and Inspection at Paris Air Show	22
Delcam to Host Orthotic Technology Forum at University of Bath	23
Delcam to Launch Complete “Open Implantology” Dental System in USA	24
Delcam’s New CAM Range on Show at MetalTech	25
ESI Co-Hosts Composites Simulation Conference at JEC Show 2011	26
OptiTex Will Attend Garment-Manufacturing and Textile Processing Trade Show	27
Right Hemisphere Announces XMetaL Integration to Fully Support Compliant 3D Visualization in DITA	27
WorkNC Dental Implantology Generates Excitement at Shows Both Sides of the Atlantic	28
<b>Financial News</b>	<b>29</b>
Centric Software Reviews Record Year for Market, Customer Expansion	29
Dassault Systemes Schedules First Quarter 2011 Results Webcast and Conference Call for April 27, 2011	30
EMC To Announce First-Quarter 2011 Financial Results on April 20	30
Mentor Graphics Corporation Announces Redemption of 6.25% Convertible Subordinated Debentures Due	

# CIMdata PLM Industry Summary

---

2026	30
OpenText to Report Third Quarter Financial Results on Wednesday, April 27, 2011	31
<b>Implementation Investments</b>	<b>31</b>
AESSEAL Bestow Majenta PLM with Multi-site Teamcenter Contract	31
Cane Creek Chooses SolidWorks to Optimize Design of Premium Bicycle Components	32
Dassault Systèmes Assists Parker Aerospace in Managing Regulatory Compliance; Implements V6 PLM Solution	33
HDL Design House Adopts Magma's Full Suite of Software to Accelerate SoC and IP Development	34
IFS North America Partners with ShipConstructor Software	35
Kendrion Streamlines Processes with IFS Applications	36
Leading Yacht Design Company John Shuttleworth Yacht Designs Ltd Chooses Siemens NX 7.5 CAD/CAM Solution from Majenta PLM	37
Lotus Renault GP and Processia Solutions Renew their Technical Partnership	38
MSC Patran and Sinda Simulate Extreme Thermal Conditions in Violet Satellite Spacecraft Collaboration	39
United States Air Force Takes Flight with Autodesk Software	40
<b>Product News</b>	<b>41</b>
Autodesk Announces Eight More 'Citrix Ready' Verified Applications	41
Bentley Launches New Lineup of Bentley Map 3D Desktop GIS Software for Infrastructure	43
C&R Technologies, Inc. Announces Version 5.4 of SINDA/FLUINT, Sinaps®, Thermal Desktop®, RadCAD® and FloCAD® are Now Available	44
CIDEON Conversion Engine Release 4.2.5 is Now Available	46
Coffey Offers Realistic Simulation to the Mining Industry	46
Consona Announces Made2Manage CADLink to Interface Design and ERP Systems	47
e-Xstream Announces the Release of DIGIMAT 4.1.2	48
Enhanced Support for Unsteady Analysis Simulations Heads List of Feature Enhancements in the 2011 Version of Tecplot 360	49
Fujitsu Signs Partnership Agreement with Zuken for Analysis Systems for Printed Circuit Boards	50
Lantek Launches the 2011 Version of Lantek Expert Collaboration	52
LEDAS Adds Profile Management to LGS 2D Constraint Solver	53
New Mobility App for Teamcenter Empowers Mobile Workforce to Make Smarter Decisions, Better Products	55
New Release of CIDEON Import PDM / PLM and CIDEON CAD Collaboration Available	56
New TracePartsOnline.net Raises the Bar for Delivering Product Content	57
Reaction Design Introduces FORTÉ CFD For Advanced, 3D Internal Combustion Engine Design	58
SAP Certifies CONTACT's PLM Standard Interface	59
ShipConstructor 2011 R2 Released	60
Wake Resolution Added to Pointwise's Hybrid Mesher for CFD Accuracy	60

## Top Story

### ***PTC Releases Windchill 10.0***

4 April 2011

PTC announced the release of [Windchill® 10.0](#), the newest version of PTC's product lifecycle management (PLM) software. With the latest release of Windchill, PTC is enabling manufacturers to do more throughout the product lifecycle, know more about product performance and get more value from PLM.

"Customers are constantly telling us about the escalating complexity of product development driven by

# CIMdata PLM Industry Summary

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manufacturers' focus on increased product differentiation, an explosion in the volume of regulatory constraints, continual quality pressures, the realization of service operations as a significant profit center, and heightened sensitivity to the environmental impact of product operations," said Brian Shepherd, executive vice president, product development, PTC.

With new capabilities that focus on product analytics and quality management, Windchill 10.0 allows customers to more effectively define, manage, and validate complete bills of material (BOMs), providing linkages across domain-specific views of product structures throughout the entire lifecycle. Windchill 10.0 also includes a new user experience and improved system administration, making it easier than ever to use and maintain and enabling broad adoption.

Users managing product structures in Windchill 10.0 can take advantage of embedded visualization.

## **Do More With Structured Product and Service Information Management**

Windchill centrally manages all product deliverables including MCAD, ECAD, documentation and service information. Windchill 10.0 unifies its ECAD data management capabilities to offer a common user experience, consistent with its existing approach for MCAD data management.

For many companies, significant business value is derived from aftermarket services and parts. To ensure highly profitable maintenance, repair, and overhaul organizations, the processes of service and spare parts planning must be concurrent with product development. When combined with Creo™ for 3D illustrated and animated service instructions and parts lists, and Arbortext® for technical communications creation and delivery, Windchill will support a complete, integral [service information solution](#).

PTC has long advocated that business improvement is enabled by process excellence. With advances in top-down-design and configuration management, and efficiencies in interference management, Windchill 10.0 supports business process optimization in many areas, but most notably for Detailed Design, Variant Design and Generation, and Verification and Validation.

"The many new configuration capabilities in Windchill 10.0 will give our users much more power and flexibility in managing products," said Terry Gimbre, Engineering Manager, Thales Communications, Inc. "This supports our commitment to continuous process improvement and enhances our ability to deliver high quality mission critical products on which lives literally depend."

## **Know More Through Comprehensive Product Analytics and Quality**

With Windchill 10.0, PTC's Relex and Insight product lines have been rebranded as part of the Windchill product family to better reflect their availability as both a stand-alone offering as well as part of a comprehensive Windchill solution.

Windchill Quality Solutions (including the former Relex products) help improve next-generation products and reduce the cost of poor quality by preventing repeat errors and building reliability and risk management into the product development lifecycle. New offerings include solutions for CAPA (Corrective Action Preventive Action) to accelerate problem resolution through improved monitoring and root cause identification.

Equally important, Windchill Product Analytics (formerly InSight) provides early knowledge of product performance and includes new solutions for cost visibility and carbon footprint analysis. These enhancements bolster an already rich solution for materials and substance management, which includes reporting against compliance specifications such as REACH and RoHS. Collectively, these solutions

# CIMdata PLM Industry Summary

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help companies understand environmental impacts and address potential points of failure before they occur.

## **Get More From Enhanced Usability, Maintainability, Upgradeability**

Windchill 10.0 enables customers to derive significantly more value from their PLM investment by providing an improved user experience along with several administrative process improvements. The approachable user experience results in a quick learning curve and expands adoption among casual users. For experienced users, the modern and pleasing user experience drives productivity and satisfaction. For IT professionals, easier upgrades, enhanced administrative support, and robust new system monitoring tools improve maintainability and lower the total cost of ownership.

"Windchill 10.0 represents a [sea change in usability](#). The amount of user research that PTC did was prodigious and impressive. And clearly, they successfully applied what they had learned," noted *Steve Krug, usability expert and author of "Don't Make Me Think - A Common Sense Approach to Web Usability."*

"Windchill 10.0, the largest software release in company history, extends PTC's PLM leadership through new capabilities designed to help product organizations thrive today and prosper tomorrow," said Shepherd. "Specifically, Windchill allows business leaders to achieve their goals through product excellence: delivering innovative offerings to the market that exceed customer demands, adhere to regulatory and quality requirements, and will support aftermarket service efficiency. With its breadth of capabilities, Windchill 10.0 delivers more out-of-the-box capabilities than ever while its intuitive user experience and upgradeability will enable accelerated adoption."

## **Learn More: Windchill 10.0 Virtual Event**

[Register](#) now to attend the virtual launch event on May 10, 2011.

## **Availability**

Windchill 10.0 is available now. Certain quality, service, and product analytics solutions will be delivered throughout calendar 2011. The timing of any product release, and any features or functionality thereof, is subject to change at PTC's discretion.

 [Click here to return to Contents](#)

## Acquisitions

### ***PTC to Unify Management of Product Hardware and Software Development Lifecycles with Acquisition of MKS***

7 April 2011

PTC and MKS Inc., a global application lifecycle management (ALM) technology leader, today announced that they have entered into a definitive acquisition agreement (the "Arrangement Agreement") pursuant to which PTC has agreed to acquire MKS for CDN\$26.20 per share for an aggregate purchase price of approximately CDN\$292.5 million in an all cash transaction.

MKS Integrity™ coordinates and manages all activities and artifacts associated with developing software intensive products, including requirements, models, code and test, ensuring comprehensive lifecycle traceability. By unifying MKS's ALM solutions with PTC's product lifecycle management (PLM) solutions, PTC will enable manufacturers to better align the management of a product's hardware

# CIMdata PLM Industry Summary

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components and related software.

“At PTC, we recognize that software is an essential component of nearly every manufactured product,” said PTC president and CEO Jim Heppelmann. “That’s why we have long believed that the development of product hardware and software should be managed as a unified process. With the acquisition of MKS, we are adding a best-of-breed ALM solution to our product portfolio, and extending how our PLM solution manages the development of software-intensive products.”

Today, software is considered a critical source of product innovation. Yet, software development is often managed separately from the hardware into which it is embedded. This can lead to reduced product quality and increased total service costs. By unifying the management of the hardware and software development lifecycles, PTC will foster greater collaboration between disparate engineering and development teams, enabling improved requirements management and system engineering.

“As a technology leader, MKS has seen incredible success in the ALM market and we are proud to have built such a strong and loyal customer base,” said MKS president and CEO Michael Harris. “We view the opportunity to join PTC, which we believe is the unambiguous PLM market leader, as a way to accelerate our own innovation, offer our existing customers even greater value, and extend our reach into new markets.”

The acquisition is expected to close in early June 2011, subject to customary conditions, including approval of the MKS shareholders, Ontario court approval, and regulatory approvals. The acquisition is expected to be neutral to PTC’s non-GAAP financial results in fiscal 2011 and slightly accretive to PTC’s non-GAAP financial results in fiscal 2012.

## **About the Transaction**

The acquisition will be carried out as a court-approved plan of arrangement under the Business Corporations Act (Ontario) (the “Arrangement”) with MKS shareholders receiving cash in the amount of CDN\$26.20 per MKS common share. PTC will finance the transaction by drawing on its existing credit facility in the amount of approximately \$250 million and with cash on hand of approximately \$54 million. All outstanding vested options and RSUs of MKS will be cash settled on the closing date of the Arrangement and all unvested options of MKS will be assumed by PTC. The Arrangement must be approved by at least 66 2/3% of the votes cast by MKS shareholders at a special meeting of MKS shareholders expected to be held in late May 2011. The transaction is subject to court approval in Ontario as well as customary closing conditions, including regulatory approvals.

The transaction has been unanimously approved by the board of directors of each of PTC and MKS. Mooreland Partners LLP acted as financial advisor to MKS with respect to the Arrangement and provided a fairness opinion to the MKS Board. The Arrangement was reviewed by an independent committee of the MKS Board in consultation with its legal and financial advisors, which unanimously determined that the Arrangement is fair to MKS shareholders and in the best interest of MKS. The MKS Board, based in part on the recommendation of the independent committee, concluded that the transaction is fair to shareholders of MKS and is in the best interests of MKS and recommends that shareholders of MKS vote in favor of the Arrangement at the special meeting of shareholders of MKS.

Directors and managers, including the Executive Chairman, CEO and CFO, who hold shares representing approximately 25% of the outstanding common shares of MKS have agreed to vote their shares in favor of the Arrangement.

The Arrangement Agreement contains customary terms and conditions, including the obligation of MKS

# CIMdata PLM Industry Summary

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to pay PTC a termination fee of CDN\$11.55 million in the event that the agreement is terminated in certain circumstances.

Upon completion of the transaction, the MKS shares will be de-listed from the Toronto Stock Exchange. Morgan Stanley & Co. acted as financial advisor to PTC.

PTC to Hold Investor Call at 8:30 am ET TODAY, April 7, 2011

PTC management will host a conference call to discuss this acquisition TODAY, April 7 at 8:30 am ET.

**What:** PTC to acquire MKS Conference Call

**When:** Thursday, April 7th, 2011 at 8:30 am (ET)

**Replay:** The audio replay of this event will be archived for public replay until 4:00 pm (CT) on April 12, 2011 at USA: 1-888-293-8912 International: 1-203-369-3023. To access the replay via webcast, please visit <http://www.ptc.com/for/investors.htm>.

## About MKS

MKS Integrity™ manages all systems and software development processes and connects all engineering artifacts, including requirements, models, code and tests, ensuring comprehensive lifecycle traceability. MKS Integrity's™ open architecture integrates disparate tools into a streamlined engineering process, allowing orchestration of engineering change and collaboration across the technology supply chain. With MKS Integrity™, engineering teams improve productivity and quality, streamline compliance and gain complete product visibility, which ultimately drives more innovative products into the market.

With offices worldwide, MKS supports customers across industries including, Automotive, Aerospace and Defense, High Tech Electronics and Medical Devices. For more information about MKS and MKS Integrity™, visit our web site at <http://www.mks.com>.

## Additional Information and Where You Can Find It

This material is not a substitute for the management information circular that MKS intends to file with the Canadian securities regulatory authorities or any other documents which PTC or MKS may file or distribute in connection with the proposed transaction. INVESTORS AND SECURITY HOLDERS ARE URGED TO READ THE MANAGEMENT INFORMATION CIRCULAR AND ALL OTHER RELEVANT DOCUMENTS IF AND WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT THE PROPOSED ARRANGEMENT.

Investors and securityholders may obtain any documents pertaining to the proposed Arrangement filed by MKS with SEDAR at [www.sedar.com](http://www.sedar.com) and filed by PTC at the SEC's website (<http://www.sec.gov>).

This announcement is for information purposes only and does not constitute or form part of any offer or invitation to purchase, otherwise acquire, subscribe for, sell, otherwise dispose of or issue, or any solicitation of any offer to sell, otherwise dispose of, issue, purchase, otherwise acquire or subscribe for, any security.

 [Click here to return to Contents](#)

## CIMdata News

### ***CIMdata in the News: “Siemens PLM Software Celebrates a Decade at Top of cPDM Ranking”***

5 April 2011

Siemens PLM Software has announced that – for the tenth year in a row – it has been recognized by leading PLM management consulting and research firm CIMdata as the market presence leader in the industry’s collaborative Product Definition management (cPDM) category. To learn more click [HERE](#).

 [Click here to return to Contents](#)

### ***CIMdata Successfully Concludes its 2011 North American Vendor Forum and Releases Its 2010 PLM Market Analysis***

4 April 2011

CIMdata presented its 2011 North American PLM Vendor Forum—the first in a series of global events. This forum was held in Ann Arbor, Michigan, USA on March 31st 2010.

CIMdata’s PLM Vendor Forums are the world’s premier gathering of technology and service suppliers focused specifically on the PLM market and issues concerning its development and growth. Participants gathered to hear CIMdata’s perspective on the state and trends of the current and future PLM market, as well detailed discussion of CIMdata’s research and perspective on 2010 PLM market results. These included CIMdata’s extensive analysis and forecasts regarding market growth across PLM domains, industries, and regions, and the performance (revenue and market share analysis) of leading PLM solution suppliers. See some attendee comments on the Twitter stream at [#CIMdata2011VF](#).

In CIMdata’s annual “State of PLM: Today’s Market and Leading Trends” address, Mr. Peter Bilello, CIMdata’s President, stated that “In the recent recession many companies cut their staffs and reduced investment to maintain profitability. Having to do more with less is one of the forces driving the market growth CIMdata saw in 2010 and companies are starting to spend some of their pent-up investment money to adopt PLM enabling solutions.” Mr. Bilello added, “2010 was a great rebound year, and with much of the growth in software licenses this should lead to strong growth in the next few years. PLM’s adoption as a true enterprise initiative continued in 2010 and is driving investments in expanded solutions and developments to make them more valuable for enterprises of all sizes.” In Mr. Bilello’s conclusion, he emphasized that the drive to “green” and compliance may be the tipping point that will make companies move to PLM. According to Mr. Bilello, “In CIMdata’s opinion, companies cannot maximize the ‘greenness’ of their products without PLM.”

Commenting on the PLM market in 2010, Mr. Stan Przybylinski, CIMdata Director of Research, said, “We were happy to report that in 2010 the PLM market showed robust growth, gaining back most of the declines from the global recession.” Recent statistics compiled by CIMdata show the Comprehensive PLM market grew 9.7% in 2010. Mr. Przybylinski added, “In 2010, the PLM market continued its upward trend during the last half of 2009 and grew faster than our predictions, made last year, for 2010. Growth is coming both from companies that already use PLM solutions who are expanding their implementations, as well as from industries that are just beginning their PLM journeys.” The range of companies expecting to benefit from PLM strategies continues to expand. Nevertheless, a wide range of companies continued investing in PLM to achieve short-term benefits as well as long-term strategic value throughout the product lifecycle and across their extended enterprise. “At CIMdata we see PLM as

# CIMdata PLM Industry Summary

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critical to competitive success and PLM is a major factor in determining which companies are best able to maintain their competitive position as global markets rebound,” noted Mr. Przybylinski.

In addition, CIMdata provided the participants with practical insights and approaches that they can use to navigate the PLM market during the current economic recovery and discussed four major trends impacting companies as well as the PLM industry—Cloud/SaaS, Changes in the Channel, the Future of CAD, and PLMisGreen that is CIMdata’s initiative on green/sustainability.

## About PLM

CIMdata defines PLM as a strategic business approach that applies a consistent set of business solutions in support of the collaborative creation, management, dissemination, and use of product definition information across the extended enterprise from concept to end of life—integrating people, processes, business systems, and information. PLM forms the product information backbone for a company and its extended enterprise.

## About CIMdata

CIMdata, a leading independent worldwide firm, provides strategic management consulting to maximize an enterprise’s ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM) solutions. Since its founding in 1983, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on PLM solutions. These solutions incorporate both business processes and a wide-ranging set of PLM enabling technologies.

CIMdata works with both industrial organizations and suppliers of technologies and services seeking competitive advantage in the global economy. In addition to consulting, CIMdata conducts research, provides PLM-focused subscription services, and produces several commercial publications. The company also provides industry education through PLM certificate programs, seminars, and conferences worldwide. CIMdata serves clients around the world from offices in North America, Europe, and Asia Pacific. To learn more about CIMdata’s services, visit our website at <http://www.CIMdata.com>, follow us on Twitter (<http://twitter.com/CIMdataPLMNews>) or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 (734) 668-9922. Fax: +1 (734) 668-1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0)495 533 666.

 [Click here to return to Contents](#)

## Company News

### ***AB Studio Named Autodesk Gold Partner and Receives an Autodesk 2010 Award***

4 April 2011

[GRAITEC](#) announced its Czech subsidiary AB Studio was once again named Autodesk Gold Partner in AEC for 2011 and received the Autodesk Award 2010 as Best Reseller in the Architecture, Engineering and Construction segment in Czech Republic. AB Studio continues as Gold Partner in 2011 and is the only highly rated Autodesk partner in AEC in Czech Republic.

Autodesk Gold Partners have achieved the highest level in the Autodesk Partner program and can offer complete Autodesk software solutions as well as measurable technical expertise in a specific industry. Gold Partners are qualified to provide customers with full solutions, from pre- and post-sales support to training, implementation and customization services. They also work closely with Autodesk so they are

# CIMdata PLM Industry Summary

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equipped to help customers maximize their return on investment in Autodesk software solutions.

Jiri Bendl, Managing Director of AB Studio comments: "We are honored to receive these awards for our service to the Czech market. We look forward to continuing to assist local firms and organizations with implementing Building Information Modeling solutions that help improve their work process in the construction field, from design to detailing. The Gold Partner status and the Best Reseller Award are clear evidence of our leading position in the respective markets."

 [Click here to return to Contents](#)

## ***CAD Schroer Announces Downloads up by 46% for Free 2D/3D CAD Software for Linux®, Windows®***

6 April 2011

Between 2009 and 2010, downloads of MEDUSA4 Personal, the free version of the professional MEDUSA4 2D/3D CAD suite, deployed by companies worldwide, increased by 46%. The eSERVICES portal for pay-per-result commercial use marked a 450% rise in registrations.

MEDUSA4 Personal, first released in 2006, is now deployed in 165 countries. Used by universities, students, DIY experts, model engineers and professional designers, the 2D/3D CAD system has been involved in the most diverse projects, from inventions, dissertations, patents and home designs to precision-engineered grandfather clocks and band logos.

[Download the 2D 3D CAD freeware](#)

### **Ideal for Entrepreneurial CAD Engineers**

With much of the world still facing tough economic times, MEDUSA4 Personal – completely free for private use, with a pay-per-result model for commercial use - is ideal for self-employed design engineers. "Many CAD engineers starting a business come to us looking for the most cost-effective software for 2D/3D mechanical design, particularly for Linux," says Michael Schroer. "At our eSERVICES portal, they can download MEDUSA4 Personal free of charge, only paying a small fee (from €2.99) to convert commercially viable results. That means no up-front costs, no risk, just a small charge that can be rolled into their project fees." CAD Schroer releases regular updates to MEDUSA4 Personal, usually within just a few months of the latest commercial release.

[eSERVICES portal for commercial users](#)

### **Linux Remains Strong**

Around 30% of MEDUSA4 Personal users are on Linux, taking advantage of a CAD system on a free platform. The software has been designed to run on CentOS, Fedora, RedHat, SuSE and Ubuntu - as well as supporting Windows XP, Vista and 7.

### **Top Ten Download Locations**

The top ten countries of MEDUSA4 Personal users in 2010, and their approximate percentage of users on Linux were, beginning with the largest user base: Germany (10%), France (19%), Italy (70%), Switzerland (10%), Austria (11%), USA (42%), Russia (73%), Spain (83%), UK (28%) and Argentina (83%).

[Download free 2D/3D CAD for Windows or Linux](#)

 [Click here to return to Contents](#)

## ***CD-adapco Announces the Opening of its New Southern California Office***

6 April 2011

After years of its office location in Tustin, CD-adapco announced the opening of its new SoCal office. Located in Irvine, California, the new, larger facility is specifically designed with customer interaction and future growth in mind.

Due to its growth, CD-adapco relocated its Southern California office to a larger space in Irvine at the end of February. The new CD-adapco Irvine office is centrally located between San Diego and Los Angeles. The office space went from a small suite of less than 1,000 square feet in Tustin to a 6,376 square foot office in the Irvine Technology Center. This location provides state-of-the-art computing facilities and dedicated customer areas for training and consultancy technology transfer. In addition, the office features contemporary architecture and attractive landscaping. The Irvine Technology Center is easily accessible by major freeways, I-5 and I-405.

Cyndi Taylor, CD-adapco's Worldwide Facilities Director commented on the move, "The office team is truly happy to have completed the move. We are not using all the space now but we have planned for future growth in the Southern California area." Taylor continued, "In this move, we increased our fiber optic bandwidth to support larger projects and increase our customer satisfaction of our sales and support teams. We have always worked hard to make visitors to our offices feel welcome. The new office space allows us to do that. We are all looking forward to welcoming new and current customers and associates to join us in the Southern California CD-adapco office."

### **CD-adapco Los Angeles**

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 [Click here to return to Contents](#)

## ***Delcam Announces First Sales Partner in Kingdom of Saudi Arabia***

5 April 2011

Delcam has strengthened its focus on the Middle East market by announcing its first Sales Partner in Saudi Arabia, Terraze Engineering. The company will work alongside Delcam's direct office in the Middle East, which was established in the UAE in 2004.

Announcing the appointment, Delcam India & Middle East Managing Director, Vineet Seth, said, "I have been visiting Saudi Arabia for the last six years, since starting the Delcam Middle East Office, and have found that the non-oil businesses are growing at a steady rate. In tune with KSA's ambition to diversify its strong economy into that of a modern industrial state, Delcam is keen to promote the use of

# CIMdata PLM Industry Summary

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the latest CAD/CAM technology in this market and we need an established partner like Terraze Engineering to do this.”

With the country’s seventh plan focusing more on economic diversification and a greater role for the private sector in the economy, Saudi Arabia is set to grow the private sector’s contribution to GDP by over 5 percent. “Delcam's CAD/CAM/CAI technology finds applications in many areas that are currently the focus sectors in KSA, in particular, the automotive and plastics industries, and also in the proposed aerospace manufacturing and maintenance businesses,” claimed Mr. Seth. “We want to leverage the strengths of our Advanced Manufacturing Solutions to cater to these companies’ requirements for design, machining and inspection of complex shapes – all from a single source of supply and supported locally in Saudi Arabia.”

“The healthcare industry is also developing rapidly and we see many areas where Delcam’s software can help practitioners to provide a faster and better service to their patients,” added Mr. Seth. “In addition, we will support the development of the local technical talent pool by promoting our solutions in academia as well.”

Khaled Hassan Saber Alobaidan, President of Terraze Engineering commented, “We have been into general engineering for some time now and felt the need to partner with a global CAD/CAM company that could demonstrate stability, adaptability and strength – both in their products and in their support for customers and resellers. In Delcam, we see this all and much more, which is why we chose to partner with them and jointly offer the next generation CAD/CAM/CAI systems to the local markets in Saudi Arabia, and also to the surrounding Middle Eastern countries.”

 [Click here to return to Contents](#)

## ***Delcam Appoints Martin Measures as its Sales Manager***

5 April 2011

Delcam announced the appointment of Martin Measures, formally the UK Sales Director at Planit Software and Licom Systems, as its Sales Manager for the North Midlands, and North and Central Wales. The appointment follows the transfer of Martin Boon to UK Sales Manager at Delcam’s newly-formed Professional Services subsidiary.

Mr. Measures began his career at BICC Components where he served a toolmaking apprenticeship before joining Lucas Aerospace. He first joined Licom Systems as an applications and support engineer in 1996. He then had periods as Production Manager and Works Manager in Liverpool-based engineering companies, before returning to Licom as North of England Sales Executive in 2002. He was promoted to UK Sales Director in 2006 and was retained in that position following the takeover of Licom by Planit.

 [Click here to return to Contents](#)

## ***Geometric Announces Appointment of Manu Parpia, Founder and Vice Chairman, as Managing Director and CEO***

8 April 2011

The Board of [Geometric Ltd.](#) announced the appointment of Mr. Manu Parpia, Founder and Vice Chairman as the Managing Director and CEO of the Company during a Board Meeting held today. Mr.

# CIMdata PLM Industry Summary

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Parpia will take over the position from Mr. Ravishankar G., who resigned for personal reasons.

At a meeting held today, the Board accepted the resignation of Mr. Ravishankar G., Managing Director and CEO and recorded its appreciation of Mr. Ravishankar's services. The Board appointed Mr. Manu Parpia, Founder and Vice Chairman, to take over the role of Managing Director and CEO with immediate effect. The appointment will be subject to necessary statutory approvals.

On the occasion, Mr. J. N. Godrej, Chairman of the Board said "On behalf of the entire Board, I thank Mr. Ravishankar for his leadership in guiding Geometric through a very critical phase of its journey. We wish him all the very best in his career. We are very pleased that Mr. Parpia has accepted our request to be the Managing Director and CEO. The Board is confident that Mr. Parpia will lead Geometric to the next level of its evolution."

On his appointment, Mr. Parpia said "I appreciate the confidence the Board has shown in me and I will do my utmost to ensure we continue to enhance shareholder value by serving our customers better and in more innovative ways which add not only to revenue growth, but also to improvement in margins. I am committed to drive Geometric's transformation to become a global leader in the engineering services space. "

Mr. Manu Parpia has over 30 years of experience in the industry, with over 21 years in the PLM and Engineering arena. He is one of the pioneers in this space in India. Mr. Parpia holds a Bachelor's degree in Chemical Engineering from McGill University, Canada and an MBA from Harvard Graduate School of Business Administration, USA.

 [Click here to return to Contents](#)

## ***PROSTEP Publishes White Paper on Neutral 3D Formats***

April 2011

PROSTEP AG has published a White Paper entitled "3D Formats in the Field of Engineering – A Comparison". It provides an overview and serves as an orientation guide for companies faced with selecting the appropriate neutral 3D format for specific use cases that are frequently encountered in practice.

Neutral 3D formats are indispensable for the distribution and exchange of 3D models in engineering departments and in upstream and downstream departments and divisions when the original system is not available, the distribution of native data is too expensive and a high level of detail is not necessary, or if a company's intellectual property needs to be protected. The selection of a certain format will determine, for example, the range of possible applications and the follow-up costs involved. Which neutral 3D format is the right one for a company will depend on a number of factors.

PROSTEP is confronted with this issue on a day to day basis and in this White Paper provides help with identifying which 3D format is appropriate for a given use case.

The White Paper is available at [www.prostep.com/nc/our-competence/white-paper/?L=1](http://www.prostep.com/nc/our-competence/white-paper/?L=1)

 [Click here to return to Contents](#)

# CIMdata PLM Industry Summary

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## ***Rand Worldwide Offers their Dassault Systèmes Customers Technical Support Services through Partnership with Razorleaf***

6 April 2011

[Rand Worldwide, Inc.](#) announced that Razorleaf Corporation will now provide RAND Worldwide's Dassault Systèmes customers with ongoing phone support. Rand Worldwide customers who hold phone support agreements for CATIA, SmarTeam and ENOVIA will now be serviced by the technical experts on the Razorleaf team.

Customers will notice little change with their phone support for the CATIA, SmarTeam and ENOVIA products. The phone numbers, support agreement details and high level of service will all remain the same. To further this transition, even Rand Worldwide's knowledge-based support service offerings, ProductivityNOW, ProductivityNOW Solo and ProductivityNOW Complete have been adopted by Razorleaf. The only difference that customers will notice will be that a Razorleaf expert will answer the phone to resolve their query. And since Razorleaf experts rotate from field implementations to the help desk and back again, they're able to dispense real-world advice that works the first time.

### **About Razorleaf**

[Razorleaf](#) is a consulting services provider specializing in process analysis, implementation, training and support of enterprise technologies including [Design Automation](#), [Enterprise Portal](#), [Product Data Management](#), and [Product Lifecycle Management](#) solutions.

 [Click here to return to Contents](#)

## ***Tata Technologies Forms New Vehicle Development Group***

7 April 2011

[Tata Technologies](#) is forming a new vehicle program group to meet the demand for faster, more complex vehicle development support within the auto industry.

Tata Technologies' Vehicle Programs & Development (VPD) Group will include more than 200 engineers operating from four automotive engineering centers of excellence worldwide -- Detroit, Coventry (UK), Pune (India) and Stuttgart (Germany).

Kevin Fisher, a senior Tata Technologies executive with more than 30 years of experience in vehicle program engineering, has been named president of the new organization and will be based in the Detroit suburb of Novi.

"Our group draws on industry-leading technology and global engineering expertise in the places where today's automotive ideas take shape," Fisher noted.

He added that the Tata Technologies VDP Group uses a multidimensional approach to vehicle engineering and development that will leverage the company's global delivery system and proprietary Knowledge Based Engineering (KBE) platforms to develop products faster and more cost effectively.

"The next decade will see an ever increasing demand for accelerated product development that also will need to incorporate more new technology than the auto industry has seen in 30 years," Fisher said. "We are positioning the Tata Technologies VPD Group to set the pace in automotive product development and technological innovation."

Fisher reported that the new group has already won several full-vehicle programs in the United States

and Europe, including development of the G2 electric car from Maryland-based Genovation Inc. European-based premium car manufacturers, North American OEMs, major automotive suppliers and independent automotive start-ups are also part of the Tata Technologies VDP Group client portfolio.

The company will be an exhibitor (**Booth #1015**) at the 2011 SAE (Society of Automotive Engineers) World Congress taking place April 12-14 in Detroit. Members of the Tata Technologies VPD team will be on hand at the company's SAE exhibit along with a scale model of Genovation's G2 electric vehicle. An urban mobility concept model, under development at the Tata Technologies North American Styling Studio, also will be on display, to showcase the styling capabilities within the VPD Group.

## **Part of the Tata Group**

Tata Technologies is part of the Tata group, India's oldest and most respected business group, with extensive international operations and fiscal-year revenues of more than \$65 billion, 61 percent of which comes from business outside of India. Tata group companies employ about 350,000 people worldwide. Tata has been a respected name in India for more than 140 years because of its adherence to strong business values and its dedication to ethics and social responsibility.

 [Click here to return to Contents](#)

## Events News

### ***Boothroyd Dewhurst to Host 2011 International Forum on DFMA, “Manufacture Success: Meeting the Challenge of Growth in Product Development”***

5 April 2011

Boothroyd Dewhurst, Inc. announced it will host the twenty-sixth annual International Forum on Design for Manufacture and Assembly (DFMA®), on June 13-15, 2011. The Forum, “Manufacture Success: Meeting the Challenge of Growth in Product Development and Manufacturing,” will take place at the Crowne Plaza Hotel, Providence-Warwick, Rhode Island, USA.

Speakers for the 2011 International Forum on DFMA represent a diverse group of advanced companies, including Boeing, ITT Aerospace, UTC, Westinghouse, Whirlpool, Microsoft and Alcoa. The conference will discuss specific product development strategies and tactics, challenges faced and met in the 2010-2011 economy and how cost reduction, improved product performance and quality are being achieved through better front-end collaboration. Among the topics covered are papers on concurrent engineering and lean manufacturing, additive manufacturing, the true costs of overseas manufacture, DFMA and supply chain procurement, and achieving environmental and business sustainability with DFMA.

### **About the DFMA Forum**

The Forum is the foremost conference worldwide on DFMA methodologies and software. DFMA structures team knowledge and guides collaboration efforts from the concept stage onward to create feature-rich products at less cost. It does this by providing comparative “should cost” estimates for manufacturing processes and materials, and by targeting opportunities for product simplification.

Each year the Forum offers insights and practical strategies to managers, financial decision-makers, design engineers, manufacturing engineers, purchasing personnel, and supply-chain experts. In addition to the presentations listed below, there will be a pre-conference workshop: “Systematic DFMA

# CIMdata PLM Industry Summary

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Deployment: Real-World Implementation and Hard Savings Make the Difference” led by Dr. Mike Shipulski of Hypertherm, Inc.

For information on the 2011 International DFMA Forum on Design for Manufacture and Assembly, and the pre-conference workshop, go to <http://www.dfma.com/forum/index.html>.

## **2011 International Forum on DFMA–Papers:**

### ***Implementation Case Studies***

Design for Gross Margin ... Case Study in the Implementation of DFMA

Chris Tsai

Boothroyd Dewhurst, Inc.

Solving the Design Engineer's Dilemma through DFMA Cost Reduction

Bill Devenish

The Devenish Group, Inc.

### ***DFMA and International Supply Chains***

The True Cost of Overseas Manufacture Revisited Seven Years Later

Dave Meeker

Neoteric Product Development

Total Cost of Ownership Calculation: A Great Complement to DFMA

Harry Moser

Reshoring Initiative

Using DFMA to Reduce Procurement Costs in an International Supply Base

Tim McGibbney

Westinghouse Electric Company

DFMA Engagement Model at Microsoft

Matt Mickleson and Mark Gloster

Microsoft

### ***DFMA Case Studies***

How DFMA Methodology Can Support a Make Vs. Buy Decision for an Icebox Assembly During Early Product Concept Development

Sanjay Gaikwad

Whirlpool

DFA Implementation at a Medical Device Company

Tom Kriska

Covidien

# CIMdata PLM Industry Summary

---

Design for Assembly – Stationary Fuel Cell Case Study

Al Dickinson and Eric O'Brien

UTC Power

## ***DFMA and Aerospace Lean Manufacturing***

Applying Lean Engineering Best-Practices on AH64D New Build Fuselages

Alfredo Herrera and Steven Flores

Boeing

From Paradigms to Progress: Developing a better design and build methodology leveraging DFMA, Lean and the Boeing workforce

Jon Shaw

Boeing

## ***DFMA Implementation***

DFMA – WHY, WHAT, HOW, and New Thinking for the Engineering Community.

Mike Shipulski

Hypertherm

Breaking the Rules with DFMA!!

Sam Mikhail

International Game Technology

Manufacturing Success: Here's Your Plan...

Dave Vranson

ITT

## ***Concurrent Engineering and Sustainability***

Concurrent Engineering: The First Thirty Years 1988-2018

Bradford L. Goldense

Goldense Group, Inc.

Design for Sustainability: Using DFMA in the Front-end Innovation Process to Develop Sustainable Solutions

Stephen Leonard

Alcoa

e-Manufacturing with Laser-Sintering is Revolutionizing Manufacturing Processes

Andy Lucibello

EOS

 [Click here to return to Contents](#)

# CIMdata PLM Industry Summary

---

## *Call for Abstracts - PDT Europe 2011*

4 April 2011

Theme 2011: Collaborate to Compete – using PLM standards to architect the extended and virtual enterprise.

Today's business organizations have to operate as part of multiple business networks. Supply Chains are becoming Supply Networks and involving design, risk sharing and support through life as well as manufacture and delivery. Operating within such networks requires agility - hard wiring businesses together is very costly in the long run, even if there is the time to do it. PLM standards are a key enabler for architectures that are the foundation of agile business.

No single PLM or ERP vendor is able to deliver all IS/IT to an industry - even if some may claim they can. The agile business model lets an organization use best of breed business processes and IT systems. Such companies can shift focus between products and services and it can operate with different business models in different geographic regions and business areas. The selection of partners and joint ventures is entirely based on business opportunities where IS/IT is an opportunity and not a risk. Mergers and acquisitions as well as spin-off activities are simplified.

PDT Europe 2011 will look into some success stories enabled by PLM standards.

It will also examine what is needed to become a “best partner”.

PDT Europe 2011 is about the strategic importance of PLM standards for regions and industries, thus is relevant at a very strategic and high level. It will also deliver practical advice at the detailed level. To “collaborate to compete” requires both a top-down and a bottom-up approach. No longer just relevant to specific company needs, PDT is important for industries as well as for regions.

### **Conference topics and proposed contributions:**

This “Call for Papers invites original contributions concerning any of the following areas:

- Business & ROI
- Technology & Standards
- Processes & Methodologies

Contributions are sought that address the below and related questions:

Standards based PLM – what is it?

Impact on technology, processes, people?·

What are the challenges in supply networks - the obvious and the hidden ones?

Is there “internal and external product data” and what is the difference?·

What about the relation PLM and ERP?

Do we have sufficient data quality to support supply networks?

What about SME:s and their role in the integrated supply network?

What have we learned so far and how to move forward?

Here are the key dates for submitting abstracts for PDT Europe 2011:

## CIMdata PLM Industry Summary

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April 4	Call for abstract open
April 30	Abstracts due
May 25	Final programme published
Sept 19	PLM/PLCS implementers workshop
Sept 20-21	PDT Main Conference

**Abstracts should be sent to:**

Eurostep

e-mail: [pdt@eurostep.com](mailto:pdt@eurostep.com)

Due-April 30

**If you have questions please contact conference management:**

Maria Härdig

Project Manager PDT Europe

e-mail: [maria.hardig@eurostep.com](mailto:maria.hardig@eurostep.com)

Phone: +46 (0)708-681 766

 [Click here to return to Contents](#)

***Carestream Health, Nexteer Automotive, Advatech Pacific to Present on PLM Strategy at Aras Conference at End of April***

7 April 2011

Aras® announced several additional speakers at Aras Community Event (ACE) 2011 International. Carestream Health, Nexteer Automotive and Advatech Pacific, along with Deutsche Blisterunion, Infosys, HCL, Kalypso, Razorleaf and Wipro, will join PLM industry experts from IDC, [CIMdata](#), and Beyond PLM at ACE 2011 in Dearborn, Michigan USA from April 26-28.

**Date:** April 26- 28, 2011

**Location:** The Henry (formerly the Ritz Carlton) - Dearborn, MI (close to Detroit USA)

**Cost:** Free to Attend - No Fee (Space is Limited - Registration Required)

**Details, Agenda and Registration:** <http://www.aras.com/ACE2011>

ACE 2011 International brings together business and IT professionals from around the world to network and collaborate on global PLM strategy, industry best practices and the next generation PLM technology from Aras.

Carestream Health, a leading global provider of medical devices and technology, will discuss Global Product Development with an Extended Supply Chain; Nexteer Automotive, formerly part of Delphi, will present on Realizing an Enterprise-wide PLM Vision; and Advatech Pacific, an Aras open user, will share their approach to Simulation Data Management and Requirements Tracking for NASA Mission Design with Aras and SharePoint.

The ACE 2011 International conference is designed for companies at every stage of PLM maturity.

# CIMdata PLM Industry Summary

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Whether you are evaluating PLM solutions, expanding an enterprise PLM implementation or just curious about the advanced Aras solutions, there is something for everyone with breakout tracks that include:

- **Basic** - Featuring introductory product demonstrations and how-to's for companies starting a PLM implementation
- **Advanced** - Providing the opportunity to drill-down into advanced topics such as integrations and global multi-site deployments
- **Business** - Getting business leaders up-to-speed on industry trends, best practices, and PLM processes and topics

Expanded to 3 days this year, the ACE 2011 International conference will also feature the popular Community Solution Showcase; a rapid-fire, round-robin series of innovative solution demonstrations presented by corporate community members worldwide. Solutions include:

- Concurrent Development on Multiple Simultaneous BOM Configurations with Effectivity
- Recipe & Formula Management
- Advanced Enterprise Search
- iPhone / iPad and Android mobile frameworks for PLM
- Connecting PLM to Google Charts and Maps, and many, many more...

Sessions will also include Aras Roadmap, What's New in Aras Innovator, Connecting PLM to the Cloud and other Aras-related topics that will provide insight into the advanced PLM solutions from Aras.

Full Agenda, Speakers, Conference Details and Free Registration at: <http://www.aras.com/ACE2011>



[Click here to return to Contents](#)

## *CD-adapco's STAR European Conference 2011 an Engineering Success*

31 March 2011

The theme of CD-adapco's STAR conferences for 2011 is "Engineering Success." The presentations given and attendees' feedback from the STAR European Conference have already proved this theme to be very appropriate.

During his welcome speech, CD-adapco's Senior Vice President, Bill Clark, said, "CD-adapco's purpose is to inspire innovation while reducing costs through the application of engineering simulation." He reported, "We are on track to meet our target of \$135 Million end user spend and have seen an organic growth of 17-20% over past 5 years.

Our latest customer satisfaction survey shows 95% of CD-adapco customers are satisfied with CD-adapco Software and Services and 97% of customers would recommend CD-adapco." These numbers are very encouraging in supporting the continuing growth and reinvestment into the company.

Dr. Line Gulstad, Manager, Global Flow Solutions, Wind and Site Competence Centre for Vestas Technology R&D was the Keynote Speaker at the conference and presented how Vestas has achieved Engineering Success by working with CD-adapco. Dr. Gulstad complimented the excellent service and support CD-adapco has provided for over a number of years. She continued, "CD-adapco has certainly inspired innovation at Vestas."

# CIMdata PLM Industry Summary

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The STAR European Conference was also the official release event for STAR-CCM+ v6, the latest, greatest, version of CD-adapco's flagship simulation tool. Attendees learned firsthand from experts at the STAR-CCM+ Lab and were equipped with a wealth of hints and tricks to make their own CAE process more effective from the outset.

An exciting session during the conference was when CD-adapco displayed its Discrete Element Modeling (DEM) feature in STAR-CCM+ v6 by playing a lottery to win an iPad. The engineers presenting the feature had used STAR-CCM+ to model and run a simulation of a lottery machine selecting numbered balls. The attendee with the matching numbers in his proceedings booklet won. The winner was Dr. Heinrich Reister from Daimler AG.

Ultimately, because the STAR European Conference 2011 was such an "Engineering Success," CD-adapco has decided to return for the STAR European Conference 2012.

 [Click here to return to Contents](#)

## ***CNC Software, Inc. Showcases Mastercam® X5, Unveils New Swiss Software at OrthoTec 2011***

4 April 2011

OrthoTec 2011 will feature the latest in the line of Mastercam machining software. Stop by **booth # 416** at the Orthopaedic Capital Center at Grace College, Winona Lake (Warsaw), IN, May 24-25, for a look at Mastercam X5, as well as a preview of the upcoming Mastercam Swiss Expert.

### **Be the First to See Mastercam Swiss Expert**

CNC Software has acquired well-respected Swiss machining software SylvieXpert. Developed in Switzerland for Swiss machines by experts in the Jura region of Switzerland where these machines were invented, we've been refining and adapting it. We will be previewing the 2011 release of Mastercam Swiss Expert at this show.

### **Mastercam Mill X5 – Built for Speed**

We'll also be spotlighting the newly released Mastercam X5, including:

- Fast, aggressive, intelligent roughing

Mastercam's new 3D surface high speed OptiRough toolpath is a new technique designed to remove large amounts of material using its dynamic milling motion. Large, aggressive cuts are followed by fast, smaller up-cuts, safely delivering a fully roughed part faster than ever.

- Smart Hybrid Finishing

Hybrid finishing intelligently blends two efficient cutting techniques in a single toolpath. This new toolpath evaluates the model shape and smoothly switches between Constant Z cutting and Constant Scallop machining. The result is a finer finish with less work.

- Streamlined multiaxis machining

Mastercam's multiaxis suite has new machining techniques and a new workflow-oriented interface. Mastercam lets you choose the basic type of work you're doing using clear illustrations, and then gives you a step-by-step process for defining how you'll cut the part. Mastercam's multiaxis machining also includes a new highly specialized interface for smooth, gouge-free engine head porting.

- New Dynamic Milling Techniques

# CIMdata PLM Industry Summary

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Dynamic milling constantly adjusts the toolpath to ensure the most efficient cut possible and allows use of the entire tool flute length, often eliminating the need for multiple depth cuts. New dynamic milling techniques include Dynamic Rest Mill and Dynamic Contour. Dynamic Rest Mill helps ensure maximum tool efficiency during cleanup routines. Dynamic Contour uses an intelligent, efficient high speed contouring strategy to remove material along walls. It supports multi-passes and can optionally include finishing passes.

For more information on Mastercam X5, and to view videos on the new software features, please visit <http://www.mastercam.com/>.

 [Click here to return to Contents](#)

## ***Delcam to Highlight Integrated Machining and Inspection at Paris Air Show***

8 April 2011

Delcam will highlight the ways in which machining and inspection can be integrated more closely on the ADS pavilion at the Paris Air Show to be held at Le Bourget from 20th to 26th June. These new processes, which can be grouped under the heading of “adaptive machining”, include techniques like electronic fixturing and On-Machine Verification.

The traditional relationship between machining and inspection is that machining is completed first and the component is then transferred to a dedicated piece of inspection equipment to be approved or rejected. However, as machining techniques become more sophisticated, and as components become larger and more complex, there are a growing number of cases where closer integration is required to give higher productivity and reduced wastage. Instead of a simple linear progression from CAD to CAM to machining to inspection, a more complicated series of steps is needed, with extra data needed to fill any gaps in the information available at the various stages.

The programming of most machining operations is based around knowing three things: the position of the workpiece on the machine, the starting shape of the material to be machined, and the final shape that needs to be achieved at the end of the operation. Adaptive machining techniques allow successful machining when at least one of those elements is unknown, by using in-process measurement to close the information gaps in the process chain.

Delcam is in a strong position to advise companies wishing to implement these new techniques. The company has a unique combination of expertise in software for both machining and inspection, which has been built up over many years of development of PowerMILL, the world’s leading specialist CAM system, and PowerINSPECT, the world’s leading hardware-independent inspection software.

The most common cases when adaptive machining techniques are needed are those where the exact position of the workpiece on the machine is unknown. With larger components, such as aerospace structures and tooling, achieving the correct position and orientation of the stock on the machine is a major challenge, taking many hours of checking and adjustment. It is often easier to adjust the datum for the toolpaths to match the position of the workpiece, than it is to align the stock in exactly the desired position.

On-Machine Verification also uses probing equipment on the machine tool. It allows initial checking of machined parts to be carried out in situ on the machine rather than having to transfer them to coordinate measuring machines for inspection. The main advantage is that any mistakes are discovered where they can be corrected – on the machine tool. Repeated cycles of machining and inspection, interspersed with

long set-up times on the respective pieces of equipment, are avoided, meaning that overall manufacturing times can be reduced.

The most obvious benefit of On-Machine Verification is for those companies that do not have existing inspection capabilities or for cases when the component is too large for their equipment. However, On-Machine Verification can also give huge time savings by enabling the quality of the component being machined to be monitored at all stages in the manufacturing process. This allows any errors to be detected earlier, and so corrected more quickly and at lower cost.

 [Click here to return to Contents](#)

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 [Click here to return to Contents](#)

## ***Delcam to Host Orthotic Technology Forum at University of Bath***

7 April 2011

Delcam is to host an Orthotic Technology Forum at the University of Bath on 19th and 20th May. This is believed to be the first event to focus specifically on new technologies and processes designed to assist Practitioners and Laboratories in prescribing, designing and manufacturing custom orthotic insoles.

The Forum will feature a group of international speakers who are leading the way in developing and using different types of technology, including hardware devices to help measure biomechanical features, pressure and anatomical form and CAD/CAM tools for plasterless manufacture, as well as new ideas for increasing productivity and reducing manufacturing costs. The event will provide an opportunity for delegates to see a wide variety of innovative technologies from a combination of diverse organisations.

Speakers confirmed to date include:

- Larry Huppin, Medical Director, Prolab Orthotics (USA)
- Craig Payne, Senior Lecturer, Latrobe University (Australia)
- Clifton Bradeley, Owner, SUB 4 (UK)
- Craig Tanner, Head Podiatrist, Aspetar Orthopaedic & Sports Medicine Hospital (Qatar)
- Stephen Newman, Professor of Engineering, University of Bath (UK)
- Phil Wells, Technical Support Manager, Salts TechStep (UK)
- Dan Swatton, Healthcare Technical Product Manager, Delcam (UK)
- Lloyd Thomas, Owner, CycleFit (Germany)
- Adrian Bowyer, Founder of the RepRap Project, University of Bath (UK)
- Dr Roozbeh Naemi, Senior Research Officer, Staffordshire University (UK)
- Francis Barrett, ALGEOS (UK)
- Michel Babin, President, TechMed 3D Inc. (USA)
- Greg Armstrong, President of Sales and Marketing, Mile High Orthotics (USA)

Their presentations will cover technologies already being used successfully by orthotics laboratories around the world, alongside emerging techniques and research projects giving an insight into custom

# CIMdata PLM Industry Summary

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orthotic advances that are expected to be available over the next few years. The programme will also include a tour of University of Bath's machining facilities, where pioneering research is being undertaken into advanced manufacturing technologies and their application in the custom orthotic insoles industry.

As well as being supported by Delcam and the University, the Forum is being sponsored by ALGEOS, Mile High Orthotics Lab, Salts TechStep and TechMed 3D. As a result, the fee for the event, including the conference dinner at the Roman Baths, is only £50.

For more details, or to register, please go to <http://www.orthotics-cadcam.com/event> or contact Hannah Harlock at Delcam on [hlh@delcam.com](mailto:hlh@delcam.com).

 [Click here to return to Contents](#)

## ***Delcam to Launch Complete “Open Implantology” Dental System in USA***

6 April 2011

Delcam will launch its complete open system for the design and manufacture of dental implant restorations in the USA at the Western States Conference of Dental Laboratories to be held in Reno, Nevada, on 29th and 30th April. Delcam offers a complete solution, from accurately capturing the implant position and orientation, through to the high-precision, multi-axis milling of customised abutments, implant bridges and dental bars, with a management system to track every stage of the process.

This launch is the latest step in the trend within the dental industry to replace “closed” manufacturing methods, in which the user is restricted to the use of a limited range of equipment and materials, with “open” systems, in which manufacturers can combine their own choice of equipment and software, and then use a broad variety of materials.

The key to the Delcam process is a new range of scan adaptors that are compatible with the leading brands of dental implant. Once the scan adaptors have been fitted to the model of the jaw, the scanner can accurately capture the positions and orientations of the implants, together with the shape of the remaining teeth. The precise fit of the scan adaptors, coupled with the latest generation of white-light 3D scanning technology used in the Delcam scanners, ensures the highest possible accuracy in the data collected.

Furthermore, the same manufacturing data that is used to produce the scan adaptors is incorporated into the templates within DentMILL that generate the milling instructions to manufacture the implant interfaces on the restorations. The resulting high accuracy is, of course, important for individual copings but is absolutely essential for bridges and dental bars that need to align with a number of implants.

This focus on high accuracy has been a key part of Delcam's strategy for the dental industry and has been supported by the panel of experts from among the company's customers that drives the development of the software. The better quality of restorations designed and made with the Delcam software benefits the patient by minimising manual adjustment of the item as it is being fitted, so reducing fitting times, and by offering improved comfort. In the longer term, the resulting restorations are more durable so giving an extended life.

As well as providing the individual components needed for a dental design and manufacturing system, Delcam offers the Delcam Dental Manager to manage the entire process. This enables laboratories to track and access all files and transactions from the initial dental scan, through CAD modelling and

manufacturing to delivery to the customer.

The laboratory's customers don't need to install any software as the complete system is Internet based. A secure log-in system allows orders to be placed through an order screen that allows customers to identify the required restorations and, based on the prescription, select the material, colour and any extra details.

The Delcam Dental Manager then allows laboratory staff to monitor the progress of the order, highlighting any outstanding steps so that the overall workload can be monitored. Customers can be allowed to view the status of their order, and can be notified by email when orders are received and dispatched.

In a similar way, the system can be used in milling centres to manage the manufacturing process, from the receipt of the design data, through manufacturing and dispatch.

 [Click here to return to Contents](#)

## ***Delcam's New CAM Range on Show at MetalTech***

4 April 2011

Delcam will promote its full range of CAM software and services at the MetalTech exhibition to be held in Kuala Lumpur from 4th to 8th May. Programs on show will include the latest version of Delcam for SolidWorks, plus the 2011 releases of PowerMILL for high-speed and five-axis machining, FeatureCAM for feature-based programming, and PartMaker for Swiss-type lathes and turn-mill equipment.

Together, these programs comprise a comprehensive range of CAM software. This broad coverage is one of the reasons why Delcam has been ranked as the world's leading specialist supplier of NC software and services by US analysts [CIMdata](#) for the past ten years. It means that large companies can source all of their CAM requirements from a single supplier, while smaller organisations can be sure that they can obtain exactly the software they need, rather than having to accept a compromise solution.

Delcam for SolidWorks marked a new direction for Delcam. Previously, the company had supplied all of its machining software as stand-alone systems that could be linked to any CAD program. In contrast, Delcam for SolidWorks is fully integrated into the SolidWorks environment so that the program looks and behaves like SolidWorks. It offers full associativity so that any changes in the CAD model will be reflected automatically in the toolpaths.

The 2011 release includes comprehensive options for the programming of turning and mill-turn equipment, alongside Delcam's technology for drilling, and two- through five-axis milling. This expanded range of strategies will allow users to program everything from lathes up to mill-turn equipment.

The 2011 version of PowerMILL makes the programming of safe toolpaths easier than ever thanks to new stock-model-engagement options that protect both the cutting tool and the machine from excessive loading. Other enhancements include new editing capabilities to simplify the machining of duplicate items; more versatile control of feed-rates for leads and links; and extra functionality for sketching, plus the completion of the move to the new clearer forms for the complete range of strategies.

FeatureCAM 2011 incorporates support for 64-bit computers, improved data exchange from a wider range of design software, the ability to use stock models and new strategies across the complete

# CIMdata PLM Industry Summary

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program, from turning to five-axis machining. The new release also has a more modern interface to make programming easier than ever.

Major highlights of PartMaker 2011 include more powerful milling functionality, a more flexible tooling library, improved programming and simulation of bar-fed mills, more detailed mid-process documentation and a host of additional productivity enhancements. In particular, multi-axis milling functionality that has taken Delcam many man-years to develop continues to be added to PartMaker at a rapid pace.

 [Click here to return to Contents](#)

## ***ESI Co-Hosts Composites Simulation Conference at JEC Show 2011***

7 April 2011

[ESI Group](#) announced the success of the composites simulation conference held on March 30, 2011 at the Paris-based [JEC composites](#) show.

With over 1,000 exhibiting companies, 27,000 visitors and 96 countries represented, the JEC show in Paris enjoys the status of being the biggest composites exhibition in the world.

ESI has actively participated in this event during the past decade and this year, for the second time, ESI's Composites Solution Manager, Patrick de Luca, co-hosted a conference dedicated to composites simulation. The conference program included a series of presentations from leading experts in the field of composites from around the world:

*"Simulations for materials and manufacturing processes in composite intensive industries"* by David Hudson, Director of Product and Market Strategy at Vistagy.

*"Virtual design of lightweight components made of textile reinforced composites"* by Professor Werner Hufenbach and Albert Langkamp from Technische Universität Dresden; Alexander Pabst, Project Manager and Research Engineer at Rolls-Royce Deutschland and Thomas Pyttel, Technical Consultant at ESI GmbH.

*"Study of SAFRAN open 60' race yacht crashworthiness"* by Nicolas Diot, Engineer – Equipments Mechanical Systems Design Department at Safran Engineering Services.

*"Simulation of the Autoclave Assisted Resin Infusion process"* by Solange Amouroux-Berthe, Process Engineer, Advanced Technologies Development Center at Dassault Aviation.

*"Fiber simulation of distortion in composite structures"* by Christian Brauner, Scientific Assistant at Faserinstitut Bremen E.V.

*"Mechanical behavior in hybrid textile composite materials"* by Dr. Asami Nakai, Associate Professor at Kyoto Institute of Technology.

Delegates at the JEC show 2011 also had the opportunity to learn more about ESI's [Composites Simulation Suite](#) by visiting ESI's booth in the 'software village' exhibition area.

For more information on ESI's Composites Simulation Suite, visit: <http://www.esi-group.com/composites-plastics>

Interested in attending an Expert Course on Composites?

Visit: <http://www.esi-group.com/CompositesExpertSeminar2011>

 [Click here to return to Contents](#)

## ***OptiTex Will Attend Garment-Manufacturing and Textile Processing Trade Show***

7 April 2011

[OptiTex](#) will be attending Texprocess 2011 at the Messe Frankfurt, May 24-27, 2011, Hall 4.0, IT Lounge, **Booth E81**.

Texprocess is a new international trade fair for processing textile and flexible materials. It will make its debut May 24-27, 2011, parallel to Techtexsil, International Trade Fair for Technical Textiles and Nonwovens, in Frankfurt am Main.

At the conference, OptiTex will demonstrate the newest release of their software OptiTex Version 11. The release of OptiTex's Version 11 software provides users with an array of enhancements and new features including improved 2D tools in Slash and Spread functionality, Walking capabilities, Variation Grading, 3D algorithm and GUI, and a new network protection system (SRM).

"As always, OptiTex is committed to keeping our software update for our loyal customers" says Ran Machtinger, CEO of OptiTex. "Our Version 11 software exhibits improved 2D and 3D capabilities among other tools that improve the performance of our signature software".

At Texprocess 2011, OptiTex is slated to present their Real-time physical cloth simulation software to compete for the Texprocess Innovation Award 2011. OptiTex will join key partners and distributors at the Texprocess 2011. Among them will be PLM solution company Insys, and distributor from Poland, Allcomp.

 [Click here to return to Contents](#)

## ***Right Hemisphere Announces XMetaL Integration to Fully Support Compliant 3D Visualization in DITA***

4 April 2011

Right Hemisphere® announced that its 3D visualization technology has been fully integrated with JustSystems XMetaL XML-based Authoring & Content Collaboration Software to deliver the most comprehensive solution for 3D DITA Documents. The integration between Right Hemisphere's Deep Exploration™ authoring solution and XMetaL® XMAX is being demonstrated this week at the CIDM DITA North America Conference in Baltimore. General release of the integrated product is scheduled for summer 2011.

This integration will enable Technical Writers and Illustrators to directly leverage 3D CAD product models within their documentation in a DITA compliant XML structured content format. "The partnership with Just Systems comes at an ideal time for both companies. DITA adoption is widespread on a global basis and the addition of 3D visual content frees the writer from extensive text, improving retention, accelerating learning and lowering translation costs as a result," said Right Hemisphere VP of Marketing Robert Merlo.

The addition of this visual information to the development of DITA standard document authoring processes will vastly improve the document authoring process, speed time to document publishing and ensure accuracy by utilizing the actual product model information directly from engineering -- thankfully without knowing how to use CAD.

# CIMdata PLM Industry Summary

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"The partnership with Right Hemisphere greatly enhances the benefits of structured XML document authoring and publishing. We are aligned in our belief that ready access to 3D CAD product information and related business data is instrumental to improving technical publications processes, reducing costs to publish and accelerating product time to market," said Addam Smith, XMetaL Project Lead and Architect at JustSystems.

Demonstrations of the integrated solution will be done at the Right Hemisphere booth during the CIDM DITA North America Conference being held today through April 6th, or to see a recent webinar on the solution sponsored by Comtech Services, please visit:

[http://www.comtech-serv.com/webinar/righthemisphere/3D\\_DITA.php](http://www.comtech-serv.com/webinar/righthemisphere/3D_DITA.php)

 [Click here to return to Contents](#)

## *WorkNC Dental Implantology Generates Excitement at Shows Both Sides of the Atlantic*

6 April 2011

The SESCOI booth at recent dental shows - IDS in Germany and the LMT's Lab Day East in New York - saw a constant stream of visitors and dental industry decision makers interested in demonstrations of the new [WorkNC Dental automated implantology module](#).

[WorkNC Dental](#) enables customized abutments to be machined within a fully automated and open process. Wizards within the software ensure it is so easy to use that dental technicians with no prior experience of NC machining can mill parts. It manages the automatic conversion of STL data into real implant connections, generating perfectly milled surfaces and a very high quality fit of the finished part at lower cost.

The large flow of visitors to the SESCOI booth at the recent IDS show in Germany was able to see the whole production process in action, from scanning to the milled implant. The Charlyrobot, [Datron](#) and Kavo 5-axis dental milling machines on the SESCOI booth, and the machine tools on the [Willemin Macodel](#), [Witech](#) and Roland partner booths, demonstrated how NC toolpaths generated by WorkNC Dental can run on all types and makes of milling machine.

Practical information and advice was also available at the SESCOI IDS booth from the [FDZ milling and service center](#), a WorkNC Dental user in Germany whose customers include dentists, dental laboratories and oral surgeons.

The North American debut of WorkNC-Dental V2.0 with automated implantology occurred April 2nd at LMT Lab Days East dental expo. During this show, dental labs were able to get hands on demonstrations of automated milling processes for implants, bars and abutments. Attendees from as far away as Canada and Mexico, who joined attendees from the U.S. East coast, were able to get educated on the milling process, view videos of dental CNC milling, examine finely crafted sample parts as well as get answers to their dental CNC questions.

The new WorkNC Dental implantology module will be demonstrated at a number of dental shows around the globe in 2011. The upcoming Mediterranean Dental Forum in Barcelona on April 7-9 will feature live milling at the SESCOI **booth (623)** on Roland and Witech dental machine tools, as well as at the **Roland booth (407)**.

 [Click here to return to Contents](#)

## Financial News

### *Centric Software Reviews Record Year for Market, Customer Expansion*

7 April 2011

[Centric Software, Inc.](#), recently closed out its fiscal year with record sales, significant growth and positive performance across operations.

Centric followed 2009, in which the global economic crisis severely affected the apparel and fast-moving consumer goods markets, with a year of significant growth and success.

“Our efforts in becoming stronger, smarter and more focused than ever are paying off,” says Chris Groves, president and CEO. “Successes in the luxury industry, major customer wins and expansion into mobile PLM markets fueled record growth in important sectors, and set the stage for key [Series C financing](#).”

#### **Among the company’s highlights:**

**Revenue growth:** For its fiscal year closing Jan. 31, Centric experienced 200 percent revenue growth in Europe over the prior year, and 100 percent growth worldwide in the fast-moving consumer goods market over the prior year.

**Customer wins:** Major customer wins included Balenciaga; Longchamp; Christine Laure; Western Glove Works/Silver Jeans Co.; Fox Head, Inc.; and Bravo Sports Corporation. The concentration of customers in France – with the new companies joining Groupe Overall (Dellaloui, El Internationale), INTERSPORT France, and Le Coq Sportif – solidifies Centric’s position as the PLM leader in the French fashion industry.

**Record implementations:** Centric continues to prove that companies can generate returns on their PLM investment in the short-term – specifically, within three to four months, or sooner. Bass Pro Shops Group was able to start using the Centric 8 PLM suite just one week into implementation, and [Western Glove Works/Silver Jeans Co. set a record for a 12-week implementation](#).

**Expansion in luxury sector:** With customers such as Longchamp and Balenciaga coming on board, Centric continues to anchor its position in the luxury sector. According to Groves, customers in the luxury goods industry value Centric’s “rich functionality,” ease of use, ability to handle multiple category products, and understanding that material choices and quality excellence drive product development and brand standards.

**Expansion into mobile PLM products:** Centric introduced patent-pending mobile applications that connect customers’ products and the consumer more closely than ever. The [Centric 8 Collection Book for Fashion iPad App](#) links data from the [Centric 8 PLM](#) system to customers through an interactive mobile device, allowing fashion houses and designers to present their collections to buyers for ordering significantly sooner and more accurately.

**Customer leadership:** Representatives from the apparel, sporting goods and recreation, consumer electronics, home products, office products and outdoor products industries conferred on topical issues – ranging from compliance management and mobile applications to the development of Chinese suppliers – as part of Centric’s Consumer Advisory Board.

“The year has demonstrated that Centric provides the value and results companies need to improve their competitive positions,” says Groves. The results set the stage for increased investor commitment to the

## CIMdata PLM Industry Summary

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company, which culminated in the late-February close on \$7.5 million in Series C venture capital financing. “This investment provides the impetus for Centric to build on our growth and product leadership,” adds Groves.

 [Click here to return to Contents](#)

### ***Dassault Systemes Schedules First Quarter 2011 Results Webcast and Conference Call for April 27, 2011***

8 April 2011

Dassault Systèmes will host a webcast and a conference call on Wednesday, April 27, 2011, to discuss its operating performance for the first quarter 2011 ended March 31, 2011.

The management of Dassault Systèmes will host the webcast at 8:30 AM London Time - 9:30 AM Paris Time and will then also host the conference call at 9:00 AM New York Time - 2:00 PM London Time - 3:00 PM Paris Time.

Both the webcast and the conference call will be available via the Internet by accessing Dassault Systèmes’ website at <http://www.3ds.com/company/finance/>.

Follow the directions on the main page to link to the audio.

Please go to the website at least fifteen minutes prior to the webcast or conference call to register, to download and install any necessary software. The webcast and conference call will be archived for 30 days.

 [Click here to return to Contents](#)

### ***EMC To Announce First-Quarter 2011 Financial Results on April 20***

7 April 2011

EMC Corporation will publish its first-quarter 2011 financial results on April 20, 2011 at approximately 7:00 a.m. ET. The news release will be available on the EMC Investor Relations website at <http://www.emc.com/ir> and on the U.S. Securities and Exchange Commission website at:

<http://www.sec.gov/cgi-bin/browse-edgar?action=getcompany&CIK=0000790070&owner=exclude&count=40>. On April 20, 2011, a news release will be issued by the company over a news wire service announcing the availability of the company's quarterly financial results at the websites referenced above.

EMC will hold a conference call for investors at 8:30 a.m. ET on April 20, 2011 to review first-quarter 2011 financial results. A live webcast of the conference call will be available at the EMC Investor Relations website at <http://www.emc.com/ir>.

 [Click here to return to Contents](#)

### ***Mentor Graphics Corporation Announces Redemption of 6.25% Convertible Subordinated Debentures Due 2026***

7 April 2011

Mentor Graphics Corporation announced its intention to redeem on April 26, 2011 (the “Redemption

## CIMdata PLM Industry Summary

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Date”), any and all remaining outstanding 6.25% Convertible Subordinated Debentures due 2026 as of April 26, 2011, at a total redemption price of 101.79% of the aggregate principal amount outstanding thereof, plus accrued and unpaid interest, if any, to but not including the Redemption Date.

 [Click here to return to Contents](#)

### ***OpenText to Report Third Quarter Financial Results on Wednesday, April 27, 2011***

5 April 2011

Open Text™ Corporation announced that financial results for its third quarter of fiscal year 2011 will be released on Wednesday, April 27, 2011 at approximately 4:00 p.m. ET.

#### **Teleconference Call**

OpenText will host a conference call on April 27, 2011 at 5:00 p.m. ET to discuss its final financial results.

**Date:** Wednesday, April 27, 2011

**Time:** 5:00 p.m. ET/2:00 p.m. PT

**Length:** 60 minutes

**Where:** 416-644-3419

866-250-4892 (Toll Free)

Investors should dial in approximately 10 minutes before the teleconference is scheduled to begin. A replay of the call will be available beginning April 27, 2011 at 7:00 p.m. ET through 11:59 p.m. on May 11, 2011 and can be accessed by dialing 416-640-1917 and using passcode 4431709 followed by the number sign.

For more information or to listen to the call via web cast, please use the following link:

<http://www.opentext.com/2/investors/ir-events.htm>.

 [Click here to return to Contents](#)

## Implementation Investments

### ***AESSEAL Bestow Majenta PLM with Multi-site Teamcenter Contract***

1 April 2011

Majenta PLM has been awarded a contract by world leading mechanical seals specialist AESSEAL to provide and implement multi-site licences of Siemens Teamcenter product lifecycle management (PLM) software solution.

The initial implementation includes a number of Teamcenter Author licences, Teamcenter Visualisation and integration with Siemens' Solid Edge and NX CAD/CAM software solutions. Teamcenter will be used to manage AESSEAL's new product introduction process in the UK, while a second phase will see this capability extended to other AESSEAL sites, initially in the UK and India. Ultimately Teamcenter will be used to manage all product-related information across all AESSEAL sites around the world, including the USA, South Africa, Germany and Brazil.

# CIMdata PLM Industry Summary

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“While the company already has a system to manage product information, we realised that, as a global business, what we need is a comprehensive product lifecycle management system that will support global product development business processes”, said Stuart Welsh, head of IT, AESSEAL.

“Teamcenter will provide that capability, enabling us to consolidate and to integrate product knowledge and business processes within a unified IT environment that is accessible to all, no matter where they are physically located within the AESSEAL community.”

Among the benefits that AESSEAL expects to gain from the implementation of Teamcenter, are reduced product development timescales and improved cost control through better and easier access to up-to-date product information and through streamlined product development business processes.

## About AESSEAL

Based in Rotherham in the UK and comprising an international group of businesses, AESSEAL is a specialist in the mechanical sealing industry. With manufacturing facilities in the UK and India, the company produces mechanical seals that help prevent leakage of liquids and gases in industrial pumps and rotating equipment and supplies customers in some 80 countries. Its products are used in the oil and gas, pharmaceuticals, chemicals, bio-fuels, power generation, pulp and paper, mining, steel production and other major industries.

 [Click here to return to Contents](#)

## *Cane Creek Chooses SolidWorks to Optimize Design of Premium Bicycle Components*

4 April 2011

If you're a dedicated cyclist, you know [Cane Creek Cycling Components](#), famous for its headsets, which are the critical bearing assemblies that secure forks and handlebars to a bike.

Among other innovations, the Fletcher, N.C., company introduced the bicycle industry to the threadless headset (AheadSet<sup>®</sup>), the dominant configuration on well-made bikes today.

Cane Creek is relying on [SolidWorks<sup>®</sup> software](#) to ensure its engineering organization performs just as smoothly as its components. The company is the latest in an expanding range of premium bicycling brands to turn to SolidWorks, including [Cervelo Cycles](#), [Cycles DeVinci Inc.](#), [Mountain Cycle](#), and [Trek Bicycle Corp.](#)

In 2004, to prepare for an ambitious product expansion, Cane Creek took time to objectively evaluate its engineering tools. The company began using SolidWorks because it found that the software is easier to use and more cost-effective, incorporates integrated simulation tools, and is the preferred design software of many vendors and customers.

“SolidWorks meets all of our evolving research and development needs,” said R&D Director Joshua Coaplen. “The purpose of our CAD system is to help us design, analyze, and manufacture parts in a way that reduces costs and time to market. SolidWorks enables us to accomplish everything that Cane Creek needs to achieve in terms of automating product development.”

For example, the company has cut time and cost from the development of prototype molds. Using SolidWorks capabilities such as *draft analysis*, Cane Creek can ensure the mold is fit for use before it is machined. “By conducting more design iterations in SolidWorks, we have cut in half the number of prototype molds required for each part, which saves us the cost of making prototype molds and up to 10 weeks of development time,” Coaplen said. “The overall impact of these productivity gains is a 15

# CIMdata PLM Industry Summary

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percent decrease in time to market.”

[SolidWorks Simulation](#) software helps Cane Creek visualize the deformation of rubber bearing seals and modify its designs accordingly before production. SolidWorks configuration tools enable engineers to automate parts of different sizes from one base headset design.

Since implementing SolidWorks, Cane Creek has increased its headset offerings by 30 percent and expanded its shock absorber product line by 100 percent. “We’ve achieved our product growth objectives in part because SolidWorks allows us to focus squarely on design,” Coaplen said. “We’re not interested in exerting more effort to learn about software. We want our thinking to concentrate on the products that we are trying to design, not the tools used to design them. SolidWorks helps us achieve that focus.”

Cane Creek plans to use SolidWorks’ [3DVIA Composer™ technical communication software](#) to create animated, interactive product manuals for the Web. The interactive manuals will replace the current paper-based manuals with the goal of enhancing customer satisfaction and reducing telephone support hours.

“The software eliminates a lot of time now spent converting engineering data to publication-ready content,” said engineer Jim Morrison. “We’ll end up with better manuals, happier customers, and engineers who can spend more time on design.”

Cane Creek relies on authorized SolidWorks reseller [TPM Inc.](#) for ongoing software training, implementation, and support.

 [Click here to return to Contents](#)

## ***Dassault Systèmes Assists Parker Aerospace in Managing Regulatory Compliance; Implements V6 PLM Solution***

6 April 2011

[Dassault Systèmes](#) announced that Parker Aerospace, an operating unit of Parker Hannifin Corporation, a global leading producer of motion and control technology solutions, is implementing ENOVIA V6 Release 2011x to better manage regulatory compliance, consolidate disparate systems and enable quicker product data inquiries. As a result, Parker Aerospace will make significant progress on its journey to a model-based enterprise, replacing 2D drawings with a common user interface in the language of 3D.

Parker Aerospace is focused on the delivery of equipment and technology for the aerospace industry, including flight control, hydraulic, fuel, fluid conveyance, thermal management, and engine systems and components for powered flight throughout the world. With ENOVIA, one of Dassault Systèmes’ solutions for collaborative PLM, Parker Aerospace is building a single repository of information with integrated regulatory controls that eliminate the risk of accidental disclosure of export-controlled information while tracking and reporting compliance activity. Simultaneously, the system allows engineers to query and find data faster, shortening the time required to solve common problems.

“ENOVIA offers Parker Aerospace several exciting advantages, including the ability to deliver the appropriate information to the right resources at the right time and the power to control objects for export compliance and intellectual property protection,” said Bob Deragisch, manager of enterprise systems for Parker Aerospace.

# CIMdata PLM Industry Summary

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Parker Aerospace is also replacing several systems by standardizing on ENOVIA and CATIA, Dassault Systèmes' solution for product design and innovation. By doing so, Parker Aerospace expects to decrease the amount of time an engineer spends looking for information about a design.

"ENOVIA offers us substantial improvements in our total cost of ownership because we are replacing multiple systems with an end-to-end DS solution that integrates ENOVIA with our existing CATIA V4 and CATIA V5 investments and eliminates the need for us to write and maintain interoperability connections," Deragisch continued. "This strategy enables our ecosystem of customers to increase their efficiency, communicate in the universal language of 3D, and enhance their data protection."

ENOVIA also provides the opportunity for Parker Aerospace to create an electronic, auditable engineering change process that can be used internally, as well as externally with customers and suppliers. Rather than printing documents related to a change, receiving several signed approvals and scanning the documents back into a system, ENOVIA will electronically route engineering changes in 3D for approval.

"It is critical for companies in the aerospace industry to have the ability to properly manage and protect sensitive design and product data. With ENOVIA, Parker Aerospace addresses this need and decreases its regulatory compliance risk," said Michel Tellier, CEO, ENOVIA, Dassault Systèmes. "At the same time, our solutions improve collaboration between engineering, manufacturing, supply chain and the various other parties involved in bringing a product to market through the universal language of 3D."

Parker Aerospace also has implementations of various other DS solutions, including DELMIA and SIMULIA.



[Click here to return to Contents](#)

## ***HDL Design House Adopts Magma's Full Suite of Software to Accelerate SoC and IP Development***

31 March 2011

Magma Design Automation Inc. and [HDL Design House](#), creators of re-usable IP cores, verification components and behavioral simulation models, announced that HDL Design House has adopted the full suite of Magma chip design software, including the Talus® digital IC implementation system and the Titan™ mixed-signal design platform. With Magma as its primary EDA vendor, HDL Design House will now be able to provide its clients with complete mixed-signal system on chip (SoC) design services, and be able to augment their current family of soft digital IP cores with analog IP. Its proven technology leadership was crucial in HDL Design House's decision to standardize on Magma's digital and analog implementation, simulation, verification and characterization software.

"Our customers range from small start-up companies to multi-national corporations in the semiconductor, wireless and medical industries and have varying design requirements," said Predrag Markovic, president and CEO, HDL Design House. "With Magma's full suite of design software, we can accelerate the delivery of our portfolio of design IP, and meet our customers' varying requirements with a combination of world class expertise in, and best-in-class tools for, digital and analog design, verification and characterization."

### **Magma: "Fastest Path to Silicon"™**

Magma offers an integrated IC design system and highly automated flow. The Talus digital implementation system combines traditionally separate front-end and back-end chip design into an integrated flow that's designed to eliminate iterations between the synthesis and place-and-route

# CIMdata PLM Industry Summary

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processes, accelerate the design cycle and reduce IC development costs. The Titan environment includes the comprehensive Titan Mixed-Signal Design Platform, and the Titan Accelerators, a set of breakthrough point-tool technologies that integrate with and augment existing analog/mixed-signal design flows. The Titan Accelerators provide unique capabilities that dramatically improve analog design productivity, and enable true analog design reuse. Unlike legacy flows, the Titan Accelerators are next-generation design technologies that provide capabilities for rapidly designing, analyzing and optimizing circuit designs and layouts, and implementing them in today's advanced process geometries. The Titan Mixed-Signal Design Platform tightly integrates mixed-signal implementation with digital implementation, circuit simulation, transistor-level extraction and verification — providing a quantum leap in efficiency and productivity for analog designers.

 [Click here to return to Contents](#)

## ***IFS North America Partners with ShipConstructor Software***

7 April 2011

[IFS](#) North America has signed a partnership agreement with Victoria, BC-based ShipConstructor Software, Inc., creating a single end-to-end application environment to meet the needs of the Canadian Government's National Shipbuilding Procurement Strategy (NSPS).

[ShipConstructor](#) provides an AutoCAD-based CAD/CAM application for the production design of ships and offshore assets, while IFS offers a project-based enterprise resource planning (ERP) system designed to support the entire asset lifecycle including design, fabrication, construction, procurement and aftermarket support, along with a broad array of supporting functions including finance and document management.

ShipConstructor and IFS have a long history of collaboration in the United States National Shipbuilding Research Program (NSRP) and share a number of common customers. ShipConstructor is noted for being the choice for naval shipbuilding in their market. The majority of the US Navy's future fleet is being 3D modelled in ShipConstructor software. IFS can boast that some of world's most renowned shipbuilders including Damen Shipyards, Austal, Todd Pacific Shipyards and Babcock use their ERP, enterprise suite, IFS Applications. IFS Applications hold a unique position in the market having been recognized by industry analysts as a best-in-class solution for project-based manufacturing and maintenance repair and overhaul, both of which are essential processes for shipyards.

“Shipbuilding is a perfect example of a project-based industry, where engineering, procurement, fabrication, and construction happen simultaneously, not sequentially,” IFS North America President and CEO Cindy Jaudon said. “IFS has led the industry in the creation of Project-Based Solutions (PBS), a new kind of ERP that meets the unique needs of project-based industry. That is why IFS Applications has been implemented by shipyards serving both commercial and government customers. Shipbuilders involved with projects for navies and coast guards in particular are attracted to our ability to offer detailed project accounting and reporting including Earned Value Management (EVM) documentation required by government entities, including those in the United States and Canada.”

“Having long worked together with a number of different shipyard customers, we are looking forward to deepening and formalizing this existing relationship with IFS,” ShipConstructor CEO Darren Larkins said. “From design to fabrication to accounting and finance, through to aftermarket support and maintenance, repair and overhaul, our two companies now offer a complete solution to support the entire lifecycle of marine assets. We do not believe there is as complete an offering available from anyone

else.”

Industrial manufacturing, which includes shipbuilding, is one of IFS’s targeted markets. IFS has a broad customer base in the industry, focusing on medium-sized to large companies that need support for complex order-driven and mixed-mode manufacturing and construction across the extended enterprise. With strong support for engineering, project execution and delivery, advanced scheduling and materials management, contract management, and maintenance, repair and overhaul, IFS’s component-based business solutions are designed to help companies improve control over risk, cost, cash, resources and time and improve their competitive position in manufacturing industry segments such as machinery, defense, fabricated metal products, and plastics. Industrial manufacturing companies also benefit from IFS’s lifecycle management solution, which goes beyond product lifecycle management (PLM) to provide better integration and management of three critical business areas—products, customers, and resources—throughout their lifecycles.

IFS Industrial Manufacturing customers include Todd Pacific Shipyards, Austal, Babcock, Holland, Kongskilde, Nolato Group, Bombardier, GEA Pharma Systems, PartnerTech, Völkl, and Johnson Pump.

 [Click here to return to Contents](#)

## ***Kendrion Streamlines Processes with IFS Applications***

7 April 2011

IFS announced that Kendrion, a global provider of electromagnetic components, has selected IFS Applications to improve turnaround times, enhance quality, optimize inventory and process standardization. The agreement, which includes IFS Applications licenses, maintenance and services, is valued at more than SKr 20 million. The contract was signed March 31, 2011.

Headquartered in Germany, Kendrion has chosen IFS Applications to replace outdated legacy solutions and an array of disparate business software solutions. IFS Applications will enable Kendrion to improve turnaround times in its configure-to-order (CTO) processes, enhance quality while minimizing waste, and reduce inventory by optimizing medium-term demand planning. The solution includes IFS Applications components for manufacturing, engineering, maintenance, distribution, sales & service, web services, quality management, document management and human resource management. Also included is the IFS Enterprise Explorer user- interface that is designed to increase usability and productivity.

“We selected IFS because the IFS team understood the business needs and the demands of our industry. The IFS team was clearly the best, and the product, IFS Applications, is a perfect match for our requirements as a medium-sized company,” said Günter Köster, Program Director at Kendrion. “We selected IFS Applications as the best “package” for us. This does not only involve software since our collaboration with IFS is centered on a business solution, including software, process know-how and innovations that relate to our customer focus. We are sure, IFS is our best choice – this solution will be more than just a piece of software.”

“We are pleased to welcome Kendrion to our growing list of high-tech customers within Automotive and Industrial Solutions, which is one of our targeted industries. Like Kendrion, we work close to our customers and value them as partners. We look forward to building a long-term relationship with the company,” said Peter Höhne, Vice President Sales & Marketing, IFS Central Europe.

The high-tech industry is one of IFS’ targeted vertical markets. IFS offers industry-specific solutions for

# CIMdata PLM Industry Summary

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companies in the electronic equipment, electronic component and semiconductor industries. These solutions support all business processes from design and mixed-mode manufacturing to after-sales support and warranty management. IFS' high-tech customers include NEC, Eltek, PartnerTech, Wolfson Microelectronics, Kitron, maxon motor, Beijer Electronics, and Olympus Keymed.

## **About Kendrion**

Kendrion is one of the worldwide leading manufacturers of electromagnetic components. Consisting of the four business units—Industrial Magnetic Systems, Industrial Drive Systems, Passenger Car Systems and Commercial Vehicle Systems—Kendrion guarantees solution-oriented customer service. Innovative ability and highest productivity characterize the Company. The corporate headquarters is located in Zeist, Netherlands and listed on the stock exchange in Amsterdam.

Since November 2007, Kendrion's Commercial Vehicle Systems business unit is strengthened by Kendrion Linnig. The company is a global supplier of electromechanical clutch systems for engine cooling and air-conditioning systems in buses, especially in the high -end market segment, as well as for special vehicles.

The U.S.-based Tri-Tech LLC was acquired by in August 2008. Tri-Tech is a manufacturer of custom electromagnetic coils, solenoids, solenoid valves and actuators.

Kendrion has approximately 1,400 employees and revenue of about €220 million.

 [Click here to return to Contents](#)

## ***Leading Yacht Design Company John Shuttleworth Yacht Designs Ltd Chooses Siemens NX 7.5 CAD/CAM Solution from Majenta PLM***

5 April 2011

Majenta PLM has announced that John Shuttleworth Yacht Designs Ltd has selected Siemens NX 7.5 for their design work.

John Shuttleworth Yacht Designs Ltd. has gained a reputation for designing fast, strong, and safe boats. In the 1980's Shuttleworth's design team developed the concept of "Integrated Structure," resulting in boats that were lighter, stiffer, and stronger than any previous multihull designs. Their designs became consistent race winners, and several have broken and still hold some of the toughest long-distance ocean sailing records. Many of Shuttleworth's racing and cruising multihulls have completed round the world voyages. They continue to develop and use this technology to design both sailing and power multihulls, where significant savings in fuel consumption and increased range can be achieved. Always working closely with their clients to achieve their wishes, they have kept to their philosophy of "form follows function" which has resulted in a unique style that can be recognised by anyone who is familiar with their work.

So as to best Maintain a portfolio of innovative and award winning designs, specialist software was required to transform the product development process and increase the level of detailed design being offered to clients. As such, [Shuttleworth](#) made contact with Majenta PLM. Orion Shuttleworth, a member of the Shuttleworth design team. commented: "I knew that Majenta PLM had implemented well integrated solutions elsewhere, and this was something that I was keen to implement at Shuttleworth Design in order to keep us at the cutting-edge of what we do".

Majenta PLM specialises in the provision, implementation and on-going support of CAD/CAM/CAE

# CIMdata PLM Industry Summary

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and PLM software solutions, for small-to-medium design engineering and manufacturing companies. The latest version of NX7.5 was demonstrated by the Majenta PLM team, which Brings High Definition PLM to product development, taking full advantage of the High Definition PLM Technology Framework to improve decision making throughout the product development process through a powerful suite of integrated CAD, CAE and CAM solutions.

From the design angle, NX clearly offered Greater design control, speed, productivity and throughput, with a complete set of flexible shape creation, manipulation, and analysis tools for design and styling. The combined powers of these tools would ensure that the most complex shapes could be created, with the adaptability to change. NX is an integrated part of a complete digital product development solution, providing all the tools that Shuttleworth needed to explore shape and style, while ensuring Better integration and coordination of multiple disciplines, design teams, and CAD systems resulting in faster time to market; overall a seamless transition into engineering, simulation and manufacturing.

With dedicated installation, training and support from Majenta PLM, the NX™ software transformed the entire product development process by enabling Shuttleworth to, explore concepts and develop these into fully parametric highly detailed models suitable for manufacture, all while maintaining stringent quality. NX is a unified solution that addresses every aspect of product development from concept ideation to manufacturing. Majenta's implementation at Shuttleworth Design offers significant improvement to the level and quality of detailed design they are able to offer their clients.

“The Majenta PLM team solved my problems with a professional and comprehensive approach. The support service they offer is excellent” commented Orion Shuttleworth.

 [Click here to return to Contents](#)

## ***Lotus Renault GP and Processia Solutions Renew their Technical Partnership***

April 2011

### **In brief:**

- The Team and Processia Solutions have been partners since 2005.
- The new agreement runs until the end of 2012.
- Processia specializes in the implementation of Product Lifecycle Management (PLM) solutions and provides advanced software development services.
- By improving software communications, information transfer and data translation between departments, efficiency gains of up to 15% are predicted in some areas.

Lotus Renault GP announced a new agreement with Processia Solutions, a technical partner since 2005. Processia Solutions, with offices in France, UK and Canada, specializes in the implementation of Product Lifecycle Management (PLM) solutions and provides advanced software development services. Their continuous contribution to Lotus Renault GP will help enhance integration and efficiency within the design, manufacture and race engineering departments of the team.

To design, build and successfully run a Formula 1 car requires a complex web of specialist technologies and software applications. Cutting edge design/manufacturing software must be integrated with excellent traceability inside the PLM systems and applications. The running of the car at race and test sessions requires bespoke, real time, software systems and technologies designed with Application Lifecycle Management (ALM) in mind. This enables the software developers to easily adapt to ever

changing updates and systems which will be monitored on the car. In Formula 1, the unique challenge is making these technologies function in harmony, to produce the end product; a Formula 1 car capable of challenging for the World Championship.

Processia Solutions will continue to bring their expertise to the Design, Production and Race Engineering departments within Lotus Renault GP. This will optimize performance and free up valuable resources to pursue additional design and development projects.

Lotus Renault GP Technical Director James Allison: "Success in Formula One is heavily dependent upon innovation. Each season brings a more intense development battle than the last and the team that can bring developments to the circuit the fastest will prosper. Furthermore, as the sport enters an era of cost control agreements, there is an even higher premium placed on innovations that allow more work to be done for less cost. Processia help us fight on this often unsung but extremely important front by delivering innovations across a wide range of our processes, allowing us to get our designs to the track faster and more efficiently."

 [Click here to return to Contents](#)

## ***MSC Patran and Sinda Simulate Extreme Thermal Conditions in Violet Satellite Spacecraft Collaboration***

4 April 2011

MSC Software (MSC) announced that the Violet Satellite project team at Cornell University selected MSC Software's finite element analysis pre-and-post processor, [Patran](#), to accurately model and predict extreme component and environmental temperatures in the Violet Satellite spacecraft.

The Violet Satellite project is the first operational agile nanosatellite. It uses eight Control Moment Gyroscopes (CMGs) to demonstrate high-agility altitude control and novel CMG steering laws. Integrated inside the satellite is a new and groundbreaking type of flight computer called the Maestro Processor. The project team utilizes simulation methods to assess the satellite's survivability in an extraterrestrial environment and its viability as a pathfinder to make scientific observations.

Patran is essential in helping ensure that Violet would be durable enough to withstand the harsh outer space conditions. A model of the structure of the Violet Satellite was imported into Patran to simulate the thermal distribution during the worst case scenario at both extremities, hot and cold. After successful analyses using Patran and [Sinda](#), the advanced thermal analysis solver from MSC; the team has concluded that the Violet spacecraft will survive.

"Patran meets the professional simulation modeling standards demanded by the aerospace industry, allowing us to confidently predict the survival of the spacecraft. Without MSC Software, the Violet Satellite would not be prepared for launch," said Joshua Abeshaus of the Violet satellite project team.

"We are thrilled to be part of these extraordinary new satellite projects underway at Cornell University," said David Yuen, Senior Vice President, Americas at MSC Software. "Our commitment to helping the team succeed and grow with simulation methods in new areas of research and development is something we will continue to support and expand."

### **About Cornell University**

Cornell University's College of Engineering was founded in 1868 and is recognized as 10th amongst the *Best Engineering Schools* in the nation according to the latest release of the annual rankings list by *U.S.*

# CIMdata PLM Industry Summary

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*News and World Report.* The Violet Satellite Project Team at Cornell University is the school's newest satellite project with a goal to win the University Nanosat-6 Flight Competition, which is aimed to train tomorrow's space professionals by encouraging small satellite research and development, integration, and flight test. To learn more, visit <http://www.engineering.cornell.edu> or The Violet Satellite Project Team at <http://cusat.cornell.edu/violet/index.php>.

 [Click here to return to Contents](#)

## ***United States Air Force Takes Flight with Autodesk Software***

5 April 2011

Autodesk, Inc. announced the United States Air Force (USAF), Office of the Civil Engineer, has signed a blanket purchase agreement (BPA) with [DLT Solutions](#) for access to the Autodesk complete portfolio of software products and Autodesk-related services and training. DLT Solutions is Autodesk's master U.S. government reseller. The contract value under the BPA against which future task orders are expected to be issued is \$26 million over a five-year period and includes access to the following Autodesk products: [AutoCAD Map 3D](#), [AutoCAD Civil 3D](#), [Autodesk Revit Architecture](#), [Autodesk Navisworks](#), [Autodesk Inventor](#), [AutoCAD](#), and [AutoCAD LT](#), among others.

"We are extremely pleased to extend our long-standing relationship with the United States Air Force through this strategic sourcing agreement," said Jay Bhatt, senior vice president, AEC solutions, at Autodesk. "Autodesk is pleased to play a key partnership role in helping Air Force Civil Engineering to provide, operate, maintain, and protect a mission critical portfolio of sustainable installation assets around the world. This agreement ensures Air Force Civil Engineering has access to the latest innovative design, geospatial, modeling, and visualization software tools and professional services to support its national defense mission."

With 20 years serving the public sector, DLT Solutions holds a GSA schedule contract that includes Autodesk products and services and supports contracting vehicles for federal, state and local governments. As Master Government Reseller for Autodesk, DLT Solutions works with Autodesk and its government Value Added Reseller community to provide federal, state and local agencies with a wide range of solutions for 2D and 3D design, energy analysis, visualization, collaboration, and documentation.

"DLT naturally looks for ways to bring more value to government agencies through our deep subject matter expertise both in solutions and government procurement," said Jim Helou, senior vice president, Autodesk Solutions at DLT Solutions. "In this instance, our sales and contracts team worked closely with the USAF procurement team to deliver a GSA-based BPA that gives great value to the Air Force on the products they have chosen to use to accomplish their objectives, and ensure access to all the value-added resources afforded by Autodesk and DLT."

### **Autodesk Software Products: Mission Critical Solutions for USAF**

One of the feature products in the BPA is AutoCAD Map 3D software, which contains the complete AutoCAD toolset and provides direct access to data needed for design drafting, construction surveying, and installation mapping activities. AutoCAD Map 3D is a standard software tool for creating and maintaining CAD and geospatial data in the 3E5X1, Engineering, career field and in the Prime Base Engineer Emergency Force (Prime BEEF) units. USAF engineers are able to aggregate cadastral, utility, topographic, environmental, image, LIDAR, and asset data; visualize and evaluate existing conditions; perform corridor, network, and site analysis; and exchange information in both CAD and GIS data

formats.

Another feature product in the BPA is AutoCAD Civil 3D which provides a surveying, design, analysis, and documentation solution for civil engineering, including land development, transportation, and environmental projects. It contains the complete AutoCAD and AutoCAD Map 3D toolsets. Using a model-centric approach that automatically updates documentation as design changes are made, AutoCAD Civil 3D enables Air Force civil engineers, designers, drafters, and surveyors to significantly boost productivity and deliver higher-quality designs and construction documentation faster.

Today, nearly every civil engineering squadron in the USAF, including the Prime BEEF and the Rapid Engineer Deployable Heavy Operational Repair Squadron Engineer (RED HORSE) units, is using some combination of Autodesk products, including AutoCAD Map 3D and AutoCAD Civil 3D, to accomplish their missions. The products are also a standard for engineering design across the Architectural and Engineering contractor community that supports Air Force Civil Engineering worldwide.

As BIM-based designs are required by the General Services Administration and U.S. Army Corps of Engineers, the USAF is now requiring a BIM-based design approach for all vertical military construction (MILCON) projects in fiscal year 2011 and beyond. With the BPA, the USAF will now have complete access to Autodesk's BIM family of products, including Autodesk Revit Architecture and Navisworks. By having access to the BIM products, USAF personnel--who deal with managing building construction, operations and maintenance--will have the software tools and training necessary to take advantage of the 3D building models being delivered by design contractors. Using the 3D BIM models, the Air Force will be able to leverage design and engineering data more easily as approximately 100-150 unique MILCON projects are undertaken annually across a physical plant valued at more than \$250 billion.

 [Click here to return to Contents](#)

## Product News

### *Autodesk Announces Eight More 'Citrix Ready' Verified Applications*

5 April 2011

Autodesk, Inc. announced that eight design software products including [AutoCAD 2012](#), [AutoCAD Architecture 2012](#), [AutoCAD Map 3D Enterprise](#), [AutoCAD Mechanical 2012](#), [AutoCAD MEP 2012](#), [Autodesk Revit Architecture 2012](#), [Autodesk Revit Structure 2012](#) and [Autodesk Revit MEP 2012](#) software have been verified as Citrix Ready\*.

Autodesk became a member of the Citrix Ready program in 2008 with [AutoCAD Map 3D](#) and [AutoCAD Raster Design](#). The Citrix Ready program helps customers identify third-party solutions recommended to enhance virtualization, networking and cloud computing solutions from Citrix Systems, Inc. Autodesk completed a rigorous verification process to ensure compatibility with Citrix XenApp 5 and Citrix XenApp 6, enhancing confidence in joint solution compatibility.

“As a member of the Citrix Ready program, we are better able to offer customers more intelligent solutions that combine our leading 3D design software with the Citrix XenApp product line,” said Robert Vizza, director of Strategic Alliances at Autodesk. “Since joining the Citrix Alliance Program in 2008, Autodesk customers have enjoyed the benefits of Citrix Ready solutions, which include centralized management of data and resources, reduced client hardware requirements and support costs,

# CIMdata PLM Industry Summary

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and consolidation of servers. Our nine Citrix Ready software offerings demonstrate our continued collaboration with partners to provide the highest-quality experience for our customers.”

Hosting Autodesk applications through Citrix XenApp provides users with the benefits of centralized computing (improved software deployment, configuration standardization, work-in-progress data distribution), as well as mobile computing, extending the reach of design data beyond the desk.

“Nearly every HOK project requires staff from multiple offices to collaborate on the same Revit model,” said John Bartolomi, vice president and director of IT Services at HOK. “All previous attempts to enable this type of collaboration presented challenges and unsatisfactory results. Running Revit over Citrix has solved a problem that seemed unsolvable just a few years ago. It provides a near desktop-like experience over rather modest bandwidth even over long distances. The Revit 2012 for Citrix is further optimized to take advantage of this great technology.”

The new Citrix Ready offerings complement Autodesk’s software and services direction by providing a remoting mechanism for some of the company’s most popular design applications. Autodesk software that supports both Citrix XenApp 5 and XenApp 6 includes AutoCAD 2012, AutoCAD Architecture 2012, AutoCAD Map 3D, AutoCAD Map 3D Enterprise, AutoCAD Mechanical 2012 and AutoCAD MEP 2012 software. Autodesk Revit Architecture 2012, Revit Structure 2012 and Revit MEP 2012 software support Citrix XenApp 6 only.

“There is a clear advantage to our mutual customers to have additional Autodesk applications join us in the Citrix Ready program,” said Matt Lull, senior director, global strategic alliances at Citrix. “Citrix Ready makes it easier for customers to select the most suitable virtualization infrastructure products for their specific needs. By verifying additional products in our program, Autodesk continues to enable its customers to obtain the highest quality user experience available today, and the simplest means for making an informed product purchasing selection.”

## **About the Citrix Ready Program**

The Citrix Ready program identifies verified solutions that are trusted to enhance virtualization, networking and cloud computing solutions from Citrix, including Citrix XenDesktop, XenApp, XenServer, NetScaler and GoToMeeting. The Citrix Ready designation is awarded to third-party products that have successfully met verification criteria set by Citrix, and gives customers an added confidence in the compatibility of the joint solution offering. The Citrix Ready program leverages alliances across the Citrix partner eco-system to meet a wide variety customer needs, and currently incorporates over 2,800 partners who have demonstrated more than 18,000 product verifications. It also includes the Citrix Ready Community Verified program which allows customers to see thousands of products that have been verified by other customers to work in their production environments. The Citrix Ready program received the Alliance Excellence Award from the Association of Strategic Alliance Professionals (ASAP) for creating a strong community through implementation of new, innovative best practices. More information about the can be found at <http://www.citrix.com/citrixready>.

\*The Citrix application is network-based, and performance of Autodesk Citrix Ready Applications may vary with network performance. The software does not include the Citrix application, nor does Autodesk provide direct support for issues with the Citrix application. Users should contact Citrix directly with questions related to procurement and operation of the Citrix application.

 [Click here to return to Contents](#)

# CIMdata PLM Industry Summary

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## *Bentley Launches New Lineup of Bentley Map 3D Desktop GIS Software for Infrastructure*

7 April 2011

Bentley Systems announced the release of [Bentley Map V8i \(SELECTseries 2\)](#). Used worldwide by designers, engineers, and geospatial professionals who map, plan, design, build, and operate the world's infrastructure, Bentley Map serves as a fully featured, universal GIS platform supporting the creation, persistence, maintenance, analysis, and sharing of 2D and 3D geospatial information. The V8i (SELECTseries 2) release provides new time-saving, productivity-enhancing functionality that further reduces costs and risks of geospatial data sharing across infrastructure projects and enterprises. It's available in three editions to meet the needs of different users:

Bentley Map PowerView for the light editor/reviewer of spatial information;

Bentley Map for the GIS professional who creates, edits, analyzes, and maintains spatial information;  
and

Bentley Map Enterprise for the GIS professional who needs access to advanced image management, solids texturing, document conversion, and long transactions in Oracle Spatial without the need for a server license.

All three editions natively support advanced 3D GIS modeling and analysis workflows by delivering accurate, engineering-quality spatial data.

Commenting on his organization's deployment of Bentley Map, Jean Pellerin, Quebec land surveyor, City of Montreal, said, "We are currently using Bentley Map for documenting the City of Montreal's water network and are extremely pleased with the productivity the product is providing us. The Bentley Map feature engine allows us to easily create smart infrastructure objects, and we are able to create customized tools to improve data quality. Bentley Map's ability to operate seamlessly with ProjectWise and Bentley Geospatial Server allows us to extend spatial data across the organization and to structure our workflows for optimum productivity. And Bentley Map's interoperability with Oracle Spatial makes it easy to share information with all stakeholders in our organization as well as with the public."

Said Erik Warring, technical head of the CAD and Surveying Software Department, Landinspektørfirmaet LE34 in Denmark, "We have been using Bentley's geospatial products for our survey applications for more than 20 years. With the new release of Bentley Map V8i, we now have a product that combines the flexibility and precision of MicroStation editing tools with the advanced GIS functionality we need in our daily work."

Warring continued, "As surveying has changed from just making 'lines on a map' to collecting both high-precision location information and detailed information concerning the objects surveyed, we have found the XFM (XML Feature Modeling) feature concept in Bentley Map both robust and easily aligned with the data we generate from our Trimble surveying instruments. We also strongly value Bentley Map's Data Browser because this tool allows us to apply quality control to the attributes of the spatial information very quickly – with it we can batch edit attributes and rapidly spot data anomalies, which are then corrected. Our clients value the clean information we can then deliver to them."

Bentley Map V8i's newly extended ability to work with the ProjectWise collaboration platform empowers multidiscipline project teams to easily manage, find, share, and visualize geospatial and CAD content, other project data, and Microsoft Office documents. ProjectWise facilitates fast access to even the largest files, manages change efficiently and effectively, and empowers distributed project teams to work collaboratively to eliminate wasted time and improve project quality.

# CIMdata PLM Industry Summary

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Additional features of Bentley Map V8i (SELECTseries 2) that lead to significant time savings and increased productivity include:

the ability to generate both 2D and 3D spatial data, enabling users to easily edit and manage information in a seamless workflow;

a unified geospatial environment providing direct access to 2D and 3D data within a standard Oracle database, plus native access to many other spatial data formats, including SHP, TAB, and GML;

the ability to perform complex and precise spatial analyses, and to create semantically intelligent and photorealistic 3D models;

map finishing tools that facilitate advanced text placements, color separations, and PDF deliverables;

advanced parcel management functionality, including cadastral mapping tools for editing and placement and COGO Editor, that helps manage parcel fabric, simplify parcel creation, and enhance interoperability with survey data;

the capabilities (with Bentley Map Enterprise) to execute long transactions in Oracle Spatial without a server product, along with support for advanced raster image management and 3D texturing – for example, to support 3D City GIS workflows incorporating photorealistic views.

Enhanced interoperability enables users of the new release of Bentley Map V8i to further leverage PDF formats and to fully leverage Google Earth to visualize projects. In addition, exported i-models add project and enterprise value through Bentley View, Bentley Navigator, and many other applications.

Finally, because Bentley Map V8i now includes a full application programming interface (API), software developers will find it ideal for developing custom GIS applications offering unprecedented ease of use.

Commenting on key advantages of the new Bentley Map V8i editions, Richard Zambuni, Bentley global marketing director, said, “Bentley Map has two outstanding qualities that set it apart: it delivers geospatial information meeting the demanding accuracy requirements of engineers working on infrastructure projects, and it makes no distinction between 2D and 3D data, handling both with equal and seamless virtuosity. Moreover, Bentley Map is perfect for the growing number of 3D City GIS projects around the world.”

The new Bentley Map product line replaces Bentley PowerMap Field, Bentley PowerMap, Bentley PowerDraft for Mapping, Bentley Cadastre, and Bentley CADscript.

For additional information about Bentley Map V8i (SELECTseries 2), visit [www.bentley.com/bentleymap](http://www.bentley.com/bentleymap).

 [Click here to return to Contents](#)

***C&R Technologies, Inc. Announces Version 5.4 of SINDA/FLUINT, Sinaps®, Thermal Desktop®, RadCAD® and FloCAD® are Now Available***

6 April 2011

C&R Technologies, Inc. announced that Version 5.4 of SINDA/FLUINT, Sinaps®, Thermal Desktop®, RadCAD® and FloCAD® are now available for download from their web site.

Part of the 5.4 release is the arrival of two new tools, [CRTech Thermal Workshop](#) and [CRTech](#)

# CIMdata PLM Industry Summary

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[SpaceClaim](#) which support the Thermal Desktop product suite by providing improved connection to various CAD tools.

## **SINDA/FLUINT Revision Highlights**

**Full Double Precision:** While key parts of the solution have always been double precision, the size of all real (and integer) variables has been extended to exploit the availability of greater accuracy. No changes to models is required.

**“Pool Boiling” (HTP) Ties:** In many situations, such as on the insides of vessel walls, convection coefficients can be calculated even though the fluid is quasi-stagnant and forced convection is not appropriate. For those situations, and to make it easier to model pool boiling, a new type of tie has been created.

**Controllable Orifices:** Orifices can often be used as models of partially opened valves. This fact has been exploited in extensions of the ORIFICE connector device to create orifices that can be commanded to open or close, or to maintain a constant upstream or downstream pressure. These options add more realistic transient behavior for modeling valve events and regulators.

[View the full list of release notes for SINDA/FLUINT](#)

## **Sinaps Revision Highlights**

**Tables:** This new feature provides a familiar grid structure for inputting columnated or tabular data, greatly simplifying the generation and maintenance of traditional SINDA/FLUINT arrays. The grid structure allows data to be pasted from other applications including Microsoft Excel™. Tables can be scaled using registers or expressions and are identified by descriptive user-definable names.

**Redesign of Turbomachinery Forms:** The input forms for pumps, compressors, and turbines have been redesigned to provide a more user-friendly interface and to assist the user in determining which inputs are required. These device models may now be stored in user libraries to facilitate their reuse in multiple locations within a single model, or to centralize their definition in multiple models.

[View the full list of release notes for Sinaps](#)

## **Thermal Desktop/RadCAD/FloCAD Revision Highlights**

**Tag Sets:** This new feature has been added to allow assigning groups of items to network elements such as heat loads, conductors, contactors, ties, etc. Tag Sets are persistent and can have all entities replaced or removed without losing the definition of the referring network element (conductor, etc). The Tag Set Manager organizes the Tag Sets and allows assignment of entities to the Tag Sets.

**Mesh Importer:** The new Mesh Importer brings externally created finite element meshes into Thermal Desktop under a controller object. The controller object allows the mesh to be repositioned in the thermal model and also serves as a light-weight post-processing tool. Mesh updates? Those are handled through a simple reimport operation that replaces the previous mesh with the new one in the repositioned location. To facilitate updates, node and element groups from the meshing tool are imported as Tag Sets to maintain all thermal connections and heat loads defined using Tag Sets.

**New Cutting Plane Tool for Post-processing:** A new cutting plane tool is available to visualize internal temperature gradients of solid objects (both finite difference and finite element).

View the full list of release notes for [Thermal Desktop](#), [RadCAD](#), and [FloCAD](#)

Of note to their clients, Autocad versions 2004, 2005 and 2006 are no longer supported. Additionally the

# CIMdata PLM Industry Summary

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built-in compiler version of SINDA/FLUINT will no longer be available for purchase or upgrade. Current users should convert to Intel compiler version of SINDA/FLUINT. Please [contact](#) them about Autocad upgrade and compiler conversion options.

Customers under current support contracts may [download the updated versions for free](#), however they will need to contact the [support department](#) for new license files. Customers who no longer are under current support contracts should not install these new versions without first contacting their sales department to upgrade to the newer versions.

 [Click here to return to Contents](#)

## ***CIDEON Conversion Engine Release 4.2.5 is Now Available***

April 2011

The new Conversion Engine 4.2.5 not only supports Autodesk Inventor and AutoCAD 2011, but also SolidWorks 2011 as well as SolidEdge ST3.

CIDEON is pleased to announce the Conversion Engine 4.2.5 release with several key benefits and capabilities:

- Conversion of SolidWorks configurations into individual files
- Comment and Markup support for Word documents
- Support for distributed standard parts libraries
- Support for custom SolidWorks script execution during conversion

New native application versions supported:

- Microsoft Office 2010
- SolidWorks 2011
- SolidEdge ST3

The Conversion Engine is flexibly scalable and can be customized to the company's requirements.

For more information about the CIDEON Conversion Engine click [here](#).

 [Click here to return to Contents](#)

## ***Coffey Offers Realistic Simulation to the Mining Industry***

6 April 2011

Dr. Stephan Arndt and Dr. Brent Fillery have recently joined Coffey Mining, bringing with them experience in advanced numerical modelling solutions for the mining industry. Using Abaqus FEA from Simulia, the Dassault Systèmes brand for realistic simulation, Coffey can now offer virtual simulation solutions to the industry to achieve the highest level of detail, accuracy and performance.

Coffey Mining's in-house simulation capability will provide clients access to the full spectrum of state-of-the-art modelling solutions, such as large three-dimensional mine scale models incorporating pore water pressure and fault movement. Problems regarding pit slope stability, interaction between pit and underground operations, optimisation for mass mining methods, caving and fragmentation all benefit from these modelling and analysis tools.

## CIMdata PLM Industry Summary

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This technology has the potential to reduce risk and substantially increase profits of mines, as the industry enables simulation tools in the design process. Safety evaluations, improvements in design planning, operations and implementation are all possible. According to Dr. Arndt, “Abaqus FEA improves the effectiveness of mine modelling and analysis and allows the integration of the advanced numerical modelling into day-to-day mine planning and monitoring in a systematic manner.”

Advanced numerical modelling represents a paradigm shift in mine design and engineering simulation, and combined with an innovative team headed by Dr. Stephan Arndt, will lead to the development of innovative, new solutions for the industry. He explained, “We approach the issue of mining modelling solutions from the position of ‘what is possible’ – we believe this has the potential to be a game changer for an industry that is moving towards larger, deeper and more difficult projects. Recent advances in computer performance and software reduce costs and significant benefits ensure realistic simulation plays a valuable role in the industry.”

Coffey Mining Manager, Rob Slater, said, “We are excited to introduce this service to our clients. As a company, we are committed to deliver extraordinary solutions. With Dr. Stephan Arndt and Dr. Brent Fillery leading this initiative we can provide specialist knowledge for the mining industry in a discipline that is at the forefront of technology.”

Dr. Stephan Arndt has a degree in Aerospace Engineering from Technical University Berlin, Germany, and holds a PhD in Fracture Mechanics. He has worked on mine planning simulations in consulting work and feasibility studies for some of the largest mining companies and projects worldwide. He co-founded Beck Arndt Engineering in 2005, a consulting company that specialised in mine planning and mining engineering for extreme environments, where he was a Director and Principal Mechanical Engineer. He has 15 years experience using Abaqus software and regularly teaches Nonlinear Finite Element Methods at the University of Western Australia.

Dr. Brent Fillery has a Bachelor of Science – Applied Mathematics, Bachelor of Engineering Mechanical (First Class Honours) and a Doctor of Philosophy, each from the University of Western Australia. He has been involved in both research and consulting activities, the prior with a specific focus on numerical fracture mechanics in structures operating in challenging thermal environments, the latter extends to in-depth vessel integrity analyses through utilisation of computational fracture mechanics assessment and application of computational rock mechanics for analysis of multi-scale open pit and underground mine design.

Visit [coffey.com](http://coffey.com) for more information.

 [Click here to return to Contents](#)

### ***Consona Announces Made2Manage CADLink to Interface Design and ERP Systems***

29 March 2011

Consona Corporation (Consona) announced the release of the Made2Manage CADLink Interface for [SolidWorks](#) and [Autodesk Inventor](#). Consona developed CADLink to bridge the gap between design and [ERP systems](#), thereby eliminating the delays and wasted effort associated with managing separate applications.

Engineers are focused on building and revising products in order to stay competitive, but often are disconnected from the inventory and production data in an ERP system. By integrating the products, CADLink keeps both the computer-aided design (CAD) model and ERP databases up to date, automates

# CIMdata PLM Industry Summary

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new part creation and bill of material (BOM) updates, and allows easy modification of the user interface to the desired view.

“We focus on streamlining product design, engineering and production processes with the integration between CAD and ERP systems,” said Craig Girdwood, president of QBuild Corporation. “Consona has ideal functionality and technology for helping manufacturers improve quality and save time. “

The specific features of CADLink are structured around the following three principle capabilities:

## **CADLink allows users to create and access Made2Manage data directly from the CAD application.**

CADLink is automatically added to the SolidWorks and Autodesk Inventor menus and the toolbar.

Once launched, CADLink analyzes the CAD model’s BOM and compares it to the BOM in Made2Manage.

New parts can be added to Made2Manage using pre-set “templates” that auto-populate new item masters with data common to a particular product category, eliminating repetitive data entry.

## **CADLink maintains up-to-date data and keeps the systems synchronized.**

Send item revisions from SolidWorks or Autodesk Inventor directly into Made2Manage and easily view BOM and/or item-level discrepancies between CAD models and ERP data.

Store and synchronize key item master properties within Made2Manage directly inside the CAD model custom properties, ensuring the information displayed in Drawings always matches ERP system data.

Add vendor part numbers and information to purchased items directly from CAD.

Add, edit or view non-CAD items on the BOM, allowing the engineer to review the entire bill, not just the components designed in the CAD tool.

Review all of the item and BOM changes and export them to an Excel spreadsheet or PDF report to be used in the internal engineering change order flow.

## **CADLink facilitates quick and easy access to information.**

Use the Made2Manage database to search and access existing part numbers.

Manipulate the SolidWorks model from a BOM point of view and decide which parts need to be ignored from the Made2Manage BOM.

## **About QBuild Corporation**

QBuild Corporation designs CAD ERP data integration software to increase engineering productivity and create consistency between both systems. Since 1995, QBuild has provided service to customers and assisted them in implementing their CAD ERP Link for a variety of software systems. For more information visit [www.qbuildsoftware.com](http://www.qbuildsoftware.com), email [info@qbuildsoftware.com](mailto:info@qbuildsoftware.com) or call (905) 479 7811 ext 224.

 [Click here to return to Contents](#)

## ***e-Xstream Announces the Release of DIGIMAT 4.1.2***

2 April 2011

e-Xstream announced the release of DIGIMAT 4.1.2; a nonlinear multi-scale material & structure

# CIMdata PLM Industry Summary

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modeling platform focused on bringing new insight into composite material design.

Driven by delivering at every release major improvements in composite simulation, DIGIMAT 4.1.2 focuses even further on the stabilization of computational convergence. DIGIMAT 4.1.2 offers to the user today a new technology and standard settings that showed both robustness and efficiency on our customers' cases especially for explicit analysis.\*

\* The new technology can be combined with stiffness update delay (SUD), a value of  $SUD = 2-10$  saving up to 60 - 90% of CPU time with respect to  $SUD = 0$ . By combining SUD with element deletion the onset of failure can be investigated. For the investigation of post-failure behavior it is recommended to use  $SUD = 0$ .

Version 4.1.2 includes the new capabilities and product enhancements highlighted below. Please review the [Release Notes](#) for details of the new capabilities.

## **Digmat-MF**

Temperature dependent models: consistency between DIGIMAT material models and output

Enhanced management of default parameters in analysis settings

## **Digmat-FE**

Restart analyses with modification in the analysis definition

## **Digmat-MX**

Multiple selections of Material Explorer and Data Explorer entries for deletion, export or plot

## **Digmat-CAE**

CPU speedup: general improvements in the code and convergence schemes

CPU speedup: improved formulation of Stiffness Update Delay (SUD) with elasto-viscoplastic material

Robustness: stabilization of convergence through improvements in the algorithm enforcing plane stress condition for shell elements

Failure: The local axis system can be used to define failure criteria on the macro and micro level two-phase composite

DIGIMAT multi-layer materials (.daf) can be used to set up coupled analyses via Digmat-CAE and the DIGIMAT plugins

## **Download & Install**

DIGIMAT 4.1.2 is available for [download](#) from the support section of their website. If you have forgotten your credentials, please request from support. The license file will be emailed to all customers.

 [Click here to return to Contents](#)

## ***Enhanced Support for Unsteady Analysis Simulations Heads List of Feature Enhancements in the 2011 Version of Tecplot 360***

6 April 2011

Tecplot, Inc. has released the 2011 version of Tecplot 360, the company's software for Computational Fluid Dynamics (CFD) visualization. The latest release provides enhanced support for unsteady analysis

# CIMdata PLM Industry Summary

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solutions including new tools for time-dependent solutions, discrete Fourier transform (DFT), updated data loaders, additional animation formats, plus a number of new general analysis tools and usability enhancements.

“The increasing use of unsteady simulations is one of the most dramatic trends in the industry today, thanks to low-cost, more powerful computers,” said Mike Peery, CEO and president of Tecplot, Inc. “The newest version of Tecplot 360 is designed to help users take full advantage of this trend in order to study things like rotating equipment, turbomachinery, and turbulent flows more effectively.”

Tecplot 360 is CFD visualization and analysis software that combines vital engineering plotting and advanced data visualization into one integrated tool. Enhancements in the 2011 version include:

■ **More analysis tools for time-dependent solutions, including DFT.** A variety of new tools and options have been added to address challenges associated with unsteady analysis simulations: one-dimensional DFT; a Time Series Probe that allows users to examine how a variable changes over time; an Integrate by Time Strands option making it easier to inspect integrated values over time; the new Time Marker option gives users the ability to visualize the current time step on the XY line plot; and the fully-integrated Time Linking feature allows users to step through and animate a solution time across frames.

■ **Updated data loaders that better support multi-file data sets.** Tecplot 360 supports most major commercial data formats, many of which have been updated for improved loading of multiple files. The most significant updates have been made to the Plot3D loader to support uniform and non-uniform grids and to the CGNS loader to support multiple file loading, files with rigid body dynamics, and larger file handling.

■ **New general analysis tools and usability enhancements.** General tools or enhancements include new color maps and 3D Multi-frames for quick tiling of the primary preset XY, YZ, and XZ views. Optional new tools for Distribution Plots and Compare XY Maps are also available. In addition to Flash (SWF) and AVI, the 2011 version supports the export of animations to MPEG-4, Windows Media Video (WMV), and Flash Video (FLV) animation formats.

## Platforms and pricing

Tecplot 360 2011 is available for 32- and 64-bit versions of Windows 7, Vista, and XP; 32- and 64-bit Mac OS X and major UNIX platforms; and 64-bit Linux platforms. Pricing starts at \$4,000 in the U.S. for a single-user perpetual license. Tecplot 360 users with current SMS agreements can upgrade to the latest version at no cost.

 [Click here to return to Contents](#)

## *Fujitsu Signs Partnership Agreement with Zuken for Analysis Systems for Printed Circuit Boards*

7 April 2011

[Fujitsu Limited](#) and Zuken Inc. announced that they have entered into a partnership agreement for analysis systems for printed circuit boards<sup>(1)</sup>, a major electronic component employed in electronic devices.

The new agreement will, in the future, enable the companies to integrate Fujitsu's SignalAdviser-SI analysis system with Zuken's CR-5000/BD-Viewer Advance system<sup>(2)</sup> and CR-5000/Board Designer<sup>(3)</sup>, allowing them to begin offering new services.

# CIMdata PLM Industry Summary

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Customers employing Zuken's CAD system will be able to begin using Fujitsu's analysis system, which has undergone extensive field-testing. For customers who are considering deployment, it will become possible to build an easy-to-use environment that leverages both Fujitsu's and Zuken's strengths.

The SignalAdviser-SI analysis system from Fujitsu is being developed by Fujitsu Advanced Technologies Limited.

## **Background**

In order to quickly develop high-quality products when manufacturing digital home appliances, as well as electronic devices and products for use in automobiles, designers must, during the initial design stage, analyze and verify the reliability of printed circuit boards—a major electronic component—from a variety of angles, taking into consideration factors including electromagnetic waves, heat, strength, and vibrations.

In the sales and development of analysis and design systems for printed circuit boards, the companies have agreed to work together to further improve customer convenience by merging Fujitsu's strengths in the area of analytics with Zuken's strengths in the area of design.

## **About Fujitsu's Analysis System**

Fujitsu's SignalAdviser-SI analysis system was developed based on the know-how the company has accumulated in designing computers, in order to address the problem of electromagnetic noise that is produced as the speed of electrical signals traveling over printed circuit boards increases. In 2002, Fujitsu began sales of the new system, which has already been widely deployed at approximately 140 companies. The system features a design advice function, which outputs not only analysis results, but also specific suggestions for reducing electromagnetic noise. As well, the system contains a proprietary developed high-precision and high-speed simulation engine that can analyze high-speed transmissions of over a GHz.

## **About Zuken's Design System**

Since developing the first CAD/CAM system in Japan for printed circuit boards in 1978, Zuken has constantly pursued the development of systems that are compatible with the latest design, mounting and manufacturing technologies. The CR-5000 series has been adopted by the world's leading companies in a wide range of manufacturing areas, including not only the field of electronics manufacturing, but also smartphones and other communications devices, transportation vehicles like automobiles—which are rapidly employing electronics technology—medical devices that require performance and safety, and devices for the aerospace and other industries.

## **Sales Target**

30 sets of products from both companies in fiscal 2011

## **Glossary and Notes**

### **1 Printed circuit boards:**

A board upon which electronic components, such as integrated circuits, resistors and condensers, are mounted and connected to construct an electronic circuit.

### **2 CR-5000/BD-Viewer Advance system:**

System for viewing designs with the CR-5000/Board Designer for review.

### 3 CR-5000/Board Designer:

Zuken's integrated environment for designing printed circuit boards.

### 4 Link module:

Program that converts the design data from Zuken to be compatible with Fujitsu's analysis system and vice versa.

 [Click here to return to Contents](#)

### *Lantek Launches the 2011 Version of Lantek Expert Collaboration*

5 April 2011

Lantek has released the new version of its sheet metal and profile cutting and punching software, Lantek Expert 2011.

The enhancements in Lantek Expert 2011 provide both operational and technical improvements, offering state of the art technology, in a fully functional environment, which combines an ergonomic and flexible interface with easy to use and comprehensive design and machining capabilities.

Alberto Martínez, the Manager of Lantek SMS says, “Our new intuitive software is significantly faster and more powerful than previous versions. It simplifies programming and includes powerful new productivity tools which enable users to make major savings in material, time and cost – important factors for retaining a competitive edge in the current business environment.”

Lantek Expert 2011 includes a host of new functionality and has been designed to integrate with all the other productivity solutions offered by the company. Sheet metal manufacturers can obtain significant operational advantage from implementing Lantek’s range of CAD/CAM/ERP systems which provide solutions for programming all types of CNC cutting machines, control of manufacturing processes and the management of manufacturing, in a single integrated environment.

The main new features of Lantek Expert 2011 include:

- **A customised interface**, for users to create tailor-made menus and combine them with existing menus.
- **Simultaneous view of the machining operations.** The new capability enables programmers to go to any step in the the machining process while viewing the cutting instruction and its graphic representation. This makes editing, deleting and viewing an extremely simple processes.
- **Management of sets of parts.** This allows parts to be grouped together in a kit making it easy to release sets of parts to production.
- **Nesting data can be configured** according to material and thickness, optimizing material utilization.
- **View Geometry.** Lantek has enhanced this function in the new version by including the ability to carry out calculations and by allowing geometrical elements to be graphically and interactively edited or deleted, greatly speeding up programming tasks.

## CIMdata PLM Industry Summary

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- **Automatic file saving** of individual part geometry from a composite CAD file. This makes it easy to extract individual parts from a geometry file that contains several components. Extra information such as thickness and material can also be saved, completely defining the part to be produced.
- **New parts list filter** This allows users to see only parts which have a production requirement, filtering out all the other components.
- **New punch gallery**, much quicker and more intuitive tool selection.
- **Instruction macros.** This function can be used to create a macro for executing chains of instructions, allowing repetitive processes to be performed with just one mouse click.
- **3D CAD/CAM simulator.**

Other advances in Lantek Expert 2011 include new advanced machine configurations, which enable multiple cutting and punching technologies to be defined for each machine, eliminating duplicate machine definitions. The new software also allows the restriction of common line cutting to particular components, giving users more control over manufacturing methodology. Handling of offcut material is improved in the 2011 version. It now considers the machine technology including cutting and clamping zones and can determine the minimum size of an offcut according to its material and thickness. Furthermore, it also includes full turret management.

Both graphics and document creation are enhanced in the new version. The part and its machining operations benefit from improvements in display and simulation. Different punch types can be viewed in different colours as can forming tools and working areas, making it easier to see and understand the cutting process. Documents for shop floor use can now be printed from inside the CAM software, and options for the information included have been increased, simplifying and facilitating programing and manufacture.

Extra improvements which bring even more advantages to Lantek users include bringing together drilling, threading and countersinking into one simple operation and the implementation of common line cutting on combination machines. Lantek aims to provide the most advanced technology to its customers and the improvements it has included in Lantek Expert 2011 will offer them significant productivity gains, keeping them ahead of their competitors.

For further information, please visit: [www.lanteksms.com](http://www.lanteksms.com) [marketing@lantek.es](mailto:marketing@lantek.es)

 [Click here to return to Contents](#)

### ***LEDAS Adds Profile Management to LGS 2D Constraint Solver***

6 April 2011

LEDAS Ltd announced version 6.0 of LGS 2D, its 2D geometric constraint solver. As the core technology of parametric software packages, LGS 2D allows users to express design intent in sketches and drawings through geometric, dimensional, and engineering constraints.

Previous versions of LGS 2D modeled only untrimmed geometric objects, such as points, infinite lines, and full circles. Version 6.0 adds the ability to deal with boundary geometries, like segments, circular arcs, and elliptic arcs. It also computes more natural solutions, as preferred by most CAD users.

## **New: Segments and Arcs as Edges**

LGS 2D 6.0 implements segments and arcs as new types of entities. Jointly, they are known as edges. Edges can be interpreted as new kinds of geometric objects and as ternary constraints. (The latter means that each edge is created on top of three LGS2D objects -- a line, circle, or ellipse, and two points -- and then imposes two coincidence constraints between the first object and each point.)

In addition, the endpoints of edges keep their order during the constraint solving process. For segments, this means that the direction of lines is always oriented from the first to the second end point. (This direction can be reverted by modifying the edge's alignment attribute.)

Each edge also has a length attribute, with values of free, fixed, or linked to a variable. Circular and elliptic arcs have the angle attribute with the same properties.

Through edges, any LGS-based application can provide users with full parametric control over their drawings, which is unreachable when the geometry is modeled with unbounded objects (i.e., lines, circles, ellipses) that are connected with two incident points. An example can be found in the video at <http://ledas.com/EdgeConstraints.php>.

Edges also represent a special case of dependent curves with three control objects. This means that they can be linked with other geometries using the appropriate constraints, such as incidence with a point, and tangency to a line. For example, when users set the incidence constraint between a point and a segment, then the point will always lie between the segment's endpoints. This is behavior that cannot be modeled with unbounded geometry.

Edges gain the advantage over user-defined curves in the area of improved performance. This is achieved from the application of analytical methods and decomposition techniques to solve the constraints.

Edges are implemented as a new add-on module for LGS 2D named LGSProfiles. Programmers can use edges in the same way as they do other LGS 2D objects.

In the future, LEDAS plans to extend the LGSProfiles module with other bounded geometries, such as composite and offset curves.

The LGSProfiles module is licensed with LGS 2D at an additional price.

Please contact [sales@ledas.com](mailto:sales@ledas.com) for details.

## **Other Improvements in LGS 2D 6.0**

Version 6.0 produces more natural solutions for several constraint scenarios. The solver implemented two new techniques to minimize changes to the model, and to keep the sketch as close as possible to the initial drawing. These techniques work effectively for scenarios with one to three unsatisfied constraints, which are typical for interactive sketcher applications.

“Version 6.0 opens a new direction of the development for our 2D constraint solver,” said Ivan Rykov, Director of R&D of Component Technologies at LEDAS, Ltd. “This was requested by our customers, whose satisfaction is the priority for our development direction.”

## **About LGS Software**

Since the first commercial release in 2004, LGS 2D and 3D software components have been licensed by a dozen CAD/CAM/CAE vendors, who have embedded them into their applications successfully.

# CIMdata PLM Industry Summary

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The LGS 2D and 3D geometric constraint solvers are used as parametric engines for 2D sketching and drawing, direct 3D modeling, assembly design, motion analysis, and other applications. LGS 2D/3D are cross-platform software packages running on 32- and 64-bit versions of Windows, Linux, Mac OS X, \*BSD, AIX, HP-UX, and other operating systems. LGS 2D and 3D have a C-style API for easy integration into a broad range of software applications using a variety of wrappers, such as .NET, Java, and C++.

LGS 2D and 3D support the creation and modification of geometric models by means of explicit and implicit constraints. Geometric objects that can be constrained include points, lines, circles, ellipses, planes, cylinders, spheres, NURBS, application-defined parametric curves, and surfaces. Objects can be fixed in the absolute coordinate system or relative to each other.

Supported constraints include geometric relations between objects (coincidence, parallelism, tangency, and so on) and dimensions that specify the required values for distances, angles, and radii. LGS 2D and 3D move and rotate objects to positions that satisfy all constraints, yet minimize transformations from initial configurations.

Other LGS functions implement advanced features of CAD/CAM/CAE systems, such as diagnostics of over- and under-defined parts of models, engineering variables and equations, help points, and tolerance management.

Example applications Lege'n'd 2D/3D are available as free downloads from the LEDAS web site. This collection of sample models represents different kinds of 2D sketches and 3D assemblies that can be constructed from LGS. The associated applications can be used to test the functionality, robustness, and performance of LGS 2D/3D. The sample applications were all created with the Open CASCADE open-source application framework; the source code is available to all licensees.

All members of Open Design Alliance can integrate the LGS 2D geometric constraint solver with a Teigha for .dwg files client application, which provides easy access to constraint solving functions. A sample application demonstrating a number of constraint-related features can be found on the ODA web site.

To learn more about LGS 2D/3D, visit the LEDAS Web site at <http://www.ledas.com/products/lgs2d>.

For more information about LEDAS, see <http://www.ledas.com/>.

 [Click here to return to Contents](#)

## ***New Mobility App for Teamcenter Empowers Mobile Workforce to Make Smarter Decisions, Better Products***

5 April 2011

[Siemens PLM Software](#) announced its new Teamcenter Mobility™ mobile device application (app) for instantly accessing — from WiFi or mobile broadband-available locations — the rich and comprehensive product knowledge managed by its [Teamcenter® software](#). Through the use of this new app, which is being initially deployed on the Apple Inc. iPad® portable digital device, companies can enhance their ability to interact with product data and workflows at the right time, in the right place and in the right context to further enhance the speed and accuracy of decisions made throughout a product's lifecycle.

**Accurate data anyplace, anytime means smarter decisions, better products**

# CIMdata PLM Industry Summary

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As companies throughout the world continually increase their reliance on Teamcenter as the digital backbone of their product lifecycle process, the need to instantly and securely deliver Teamcenter managed data to more – and sometimes unconventional – locations has also increased. Teamcenter is a widely used PLM system in the automotive and aerospace industries, and is used extensively in other industries such as consumer products, shipbuilding and high tech electronics. Companies in all these industries need to rely not only on the valuable input of typical office-based personnel, but also on critical feedback from individuals who may be working in less conventional locations.

This mobile workforce can include executives who spend a significant amount of time in airports, on airplanes or attending meetings at remote locations. It could also include field personnel working inside a partially assembled airplane fuselage or walking the shop floor of an automotive assembly line. Teamcenter Mobility enables these individuals to search, view and interact with product and process workflow information on the spot using a convenient mobile device. This enables decision makers to make critical decisions without delay using the most up-to-date information, while allowing contributors to provide their unique perspective in real-time. As a result, companies can react quickly and intelligently to the rapidly changing environments associated with all product lifecycle disciplines such as design, simulation, manufacturing and maintenance.

“Teamcenter Mobility is an exciting and significant evolutionary step in delivering the HD-PLM vision we announced last summer,” said Chuck Grindstaff, president, Siemens PLM Software. “By making up-to-the-minute Teamcenter data available at the necessary point of activity, our customers can act immediately on accurate information and further reduce their design and production cycle times. This is entirely consistent with the vision of HD-PLM to help our customers make smarter decisions that result in better products, thus enabling them to establish the competitive advantage of being the first to deliver innovative solutions the market will embrace.”

## **Availability and Support**

Teamcenter Mobility is available immediately and currently enables the user to search, display and interact with detailed product information, including 3D product models, providing a tool with a visually compelling presentation that enhances understanding and supports decision making. The initial implementation is being deployed via iPad with additional platform and functionality support to be announced at a later date.

 [Click here to return to Contents](#)

## ***New Release of CIDEON Import PDM / PLM and CIDEON CAD Collaboration Available***

April 2011

The release 7.1 of CIDEON Import PDM / PLM and CIDEON CAD Collaboration not only supports the most current versions of the CAD systems, already covered by CIDEON, but now also **CATIA V5**. Besides the known flexibility the functionality has been enhanced again, based on customer requirements.

Extract from the most remarkable functionality:

CATIA V5 now supported

Support for Autodesk Inventor 2011, AutoCAD 2011, SolidWorks 2011, SolidEdge ST3 and MicroStation V8i

# CIMdata PLM Industry Summary

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Autodesk Inventor: Support for Frame Generator, Tubing & Piping, Cable & Harness

Autodesk AutoCAD: Handling of datalinks and underlays

Support for distributed standard parts libraries

Support for multiple files of the same type on the same document info record

Supports linking to the following SAP objects:

- Document info record (DRAW)
- Material master (MARA)
- Customer (KNA1)
- Vendor (LFA1)
- Equipment master (EQUI)
- Architectural object (VIBDAO)
- WBS element (PRPS)
- Functional location (IFLOT)
- Sales document item (VBAP)
- Purchase order item (EKPO)
- Billing document (VBRK)
- Delivery line item (LIPS)
- Service notification (SQMEL)

Here is more detailed information regarding [CIDEON Import PDM / PLM](#) and [CIDEON CAD Collaboration](#).



[Click here to return to Contents](#)

## ***New TracePartsOnline.net Raises the Bar for Delivering Product Content***

4 April 2011

[TraceParts](#) announced the immediate availability of the third major release of its flagship portal TracePartsOnline.net. As a global engineering resource TracePartsOnline.net delivers free 2D drawings and 3D CAD models, product specifications, technical datasheets and PLM news to more than one million registered users. In 2010 alone, TracePartsOnline.net delivered more than 23 million CAD models and 65 million page views to a very dynamic design community.

The new version of TracePartsOnline.net features a completely redesigned user interface, available in 24 languages, allowing users to find, configure, and download product content of more than 100 million parts from hundreds of supplier catalogs. Users can now benefit from an optimized experience while searching, browsing, viewing in 3D, configuring and finally downloading product data.

The new “My TraceParts” feature allows users to manage their favorite catalogs, product categories, products, and part numbers. They can also access the CAD models they’ve previously downloaded and the product comments they’ve posted. TracePartsOnline.net features a unique content typology so users clearly know which catalogs and products contain 2D, 3D, PDF datasheets, external links to product pages, automated requests for quotation, and more.

“We took a user-centric approach while designing and developing this new TracePartsOnline.net release.” said Gabriel Guigue, TraceParts Managing Director. “We’ve optimized the user experience by simplifying the search, product configuration and information download, while delivering unique new

features like ‘My TraceParts’.”

“Time to market and design productivity are extremely critical to all industries, so we believe this new TracePartsOnline.net release is the best possible design tool to find, specify, and source purchased parts while not having to redraw them. TracePartsOnline.net has a strong technological foundation to enable many new disruptive user-focused developments in the near future, while maximizing the market exposure of supplier catalogs. Ten years after our very first release, this new version is the continuation of our long commitment to the industry”.

 [Click here to return to Contents](#)

## ***Reaction Design Introduces FORTÉ CFD For Advanced, 3D Internal Combustion Engine Design***

5 April 2011

Reaction Design introduced FORTÉ™--the most advanced [computational fluid dynamics \(CFD\)](#) package for realistic 3D modeling of fuel effects in internal combustion engines. Incorporating t advanced spray models, as well as high-fidelity fuel chemistry models that are backed by decades of research, FORTÉ CFD delivers simulation accuracy and speed that enables clean and efficient engine design. FORTÉ CFD provides accurate results in just hours where traditional [CFD tools](#) would take days or weeks.

“[FORTÉ CFD](#) will help automotive engine designers develop the most fuel-efficient and low-emission power plants to propel the vehicles of the future,” said Bernie Rosenthal, CEO of Reaction Design. “Practice shows that existing [CFD tools](#) can’t handle realistic fuel chemistry required for accurate emissions and efficiency predictions. FORTÉ gives designers the ability to model efficient engines that are able to take advantage of the broadening fuels landscape while meeting increasingly strict emissions standards.”

Incorporating decades of experience and advances in fuel chemistry, [FORTÉ CFD](#) enables accurate simulations using detailed chemistry mechanisms. The mechanisms for real fuel chemistry that can be used in FORTÉ are backed by years of research within the Model Fuels Consortium, which has extensively validated model predictions over the wide range of pressures, temperatures and equivalence ratios important for advanced designs. While existing CFD simulation packages cannot handle the complexity of real fuel models, FORTÉ CFD’s industry leading technology simplifies and accelerates the chemistry calculations that are required to achieve unprecedented accuracy with time-to-solution metrics that fit in commercial-development timeframes.

Through a joint venture between Reaction Design and Wisconsin Engine Research Consultants, FORTÉ CFD integrates unique “grid independent” spray models that greatly reduce the amount of calibration required for predicting engine performance. These high-fidelity spray models also allow real fuel analysis by matching multi-component physical properties with a multi-component chemistry model.

Generating the computational meshes required for internal combustion engine simulations have traditionally required expert personnel and long cycle times. Some commercially available CFD packages use automatic meshing techniques that claim to reduce the time and expertise required to create a mesh. These solutions often add more complexity to the problem that can actually increase the overall time-to-solution and affect the accuracy of the calculations. FORTÉ CFD includes a novel and proprietary automated mesh generator that, combined with the advanced mesh independent spray models, produces accurate meshes without compromising run time or solution accuracy.

# CIMdata PLM Industry Summary

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Benchmark tests have shown that FORTÉ CFD delivers more accurate predictions of basic [combustion characteristics](#), such as ignition timing, knocking tendency and pollutant and soot emissions, when compared to other [CFD software](#) products. FORTÉ CFD also allows simulation of advanced engine concepts promising dramatic efficiency improvements, such as Premixed or Homogeneous Charge Compression Ignition (PCCI or HCCI) and dual-fuel engines.

Key features of FORTÉ CFD include:

Proprietary combustion chemistry solver: Employing industry leading numerical solution methods, FORTÉ CFD is the only commercial CFD software that supports the modeling of real fuel chemistry effects with acceptable time-to-solution metrics.

Advanced spray models: High-fidelity spray models provide mesh-independent results and account for multi-component fuel-vaporization effects and flash boiling, as well as state-of-the-art droplet breakup and collision effects.

Automatic mesh generation: Starting from a CAD description of the geometry, FORTÉ CFD creates a Cartesian mesh that is dynamic, adapts on-the-fly, and is fully automated throughout the piston cycle.

## **Availability:**

Reaction Design's FORTÉ CFD product for predictive engine simulation is available today. For more information, please visit <http://www.reactiondesign.com/products/open/forte.html>. For pricing information, please contact the Reaction Design sales team at 1-408-550-1920.

 [Click here to return to Contents](#)

## ***SAP Certifies CONTACT's PLM Standard Interface***

4 April 2011

CONTACT Software GmbH has obtained certification for its PLM standard interface for SAP® ECC 6.0 for the new version CIM DATABASE 2.9.8. The verification process was carried out in Walldorf on the basis of SAP's 'Cross Application – PLM 4.7' scenario and includes the categories CAD, Document Management, Product Specification and Product Lifecycle Management (PDM/PLM). The CIM DATABASE Gateway for SAP supports bidirectional synchronisation of data and documents between the two business applications and has now been approved as a 'SAP® Certified Integration with SAP Applications'. For the first time this seal of approval also applies to NetWeaver's component SAP® Solution Manager. This solution makes it possible for clients to register their SAP-related IT landscape including all certified 3rd-party components with SAP, in order to simplify administration of their IT landscape.

Smooth development processes come about from product data which can flow unimpeded: between tools, systems, employees and partners. Therefore CONTACT Software has a variety of standard integrations for solutions from other suppliers in its product portfolio, and these certified on a regular basis, in so far as this is offered by the manufacturer. With its open PLM platform, CONTACT makes flexible networked solutions available for businesses who want to display their processes in the context of Product Lifecycle Management: from project planning, to development and manufacture, through to operation, maintenance and recycling. With the CIM DATABASE Gateway for SAP, CONTACT Software is addressing businesses who value integrated development of the virtual, and also the physical product, and support of collaborative development processes.

# CIMdata PLM Industry Summary

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Functions, flexibility and seamless integration in SAP are based on SAP's PLM API and the CIM DATABASE services Shared Object Management and ERP ACCESS. They support service-oriented and process-controlled synchronisation of product specifications between the two systems. This means that commercial data, such as current inventory stocks or material prices of specific components, open manufacturing orders and orders directly at the developmental work stations, can be taken into consideration. The CIM DATABASE Gateway for SAP combines product development with product industrialisation, and ensures highly integrated processes, and thus reduced throughput times and errors in developmental and manufacturing businesses.

 [Click here to return to Contents](#)

## ***ShipConstructor 2011 R2 Released***

6 April 2011

The latest release of ShipConstructor CAD/CAM software offers performance enhancements and new tools to speed up the ship design and construction process.

ShipConstructor 2011 R2 New Features:

- **Increased Speed** – Less time spent waiting. Assembly and arrangement drawing creation and updating performance has been improved by up to 50%.
- **Batch Updating of Production Drawings** – Increased user efficiency by allowing updating of multiple production drawings in a single operation.
- **Project Equipment List** – Allows management and reconciliation of the project master equipment list to the 3D model in ShipConstructor.
- **Improved Change Management** – ShipConstructor's Associative DWG technology has been leveraged to improve change management. More undo options are available.
- **Updatable Twisted Stiffeners** – Shrinks the design spiral between Hull and Structure. Allows updating of twisted stiffeners in structure drawings with changes from hull drawings without having to re-export the part.
- **Reports by Model Drawing** – Enables easier work-in-progress reports by generating reports for content within individual model drawings.

For more information, see the technical release document: [Introducing ShipConstructor 2011 R2](#)

For download information, see the [Updates Page](#).

 [Click here to return to Contents](#)

## ***Wake Resolution Added to Pointwise's Hybrid Mesher for CFD Accuracy***

31 March 2011

Pointwise announces the latest release of its Gridgen computational fluid dynamics (CFD) meshing software, featuring an update to the T-Rex hybrid meshing technique that allows for the resolution of wakes and other off-body flow phenomena.

The wake region behind the tailplanes on the SUBOFF benchmark geometry are fully resolved by adding baffles to this T-Rex mesh.

## CIMdata PLM Industry Summary

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"T-Rex gives customers the ability to generate hybrid meshes for complex geometry with clustering in the near-body boundary layer region," said John Steinbrenner, vice president of research and development at Pointwise. "But accurate CFD solutions also require resolution of wakes behind tailplanes, wings and other off-body features. Adding baffles to T-Rex provides that resolution."

T-Rex (anisotropic tetrahedral extrusion) is an automated meshing technique that starts from a triangulated surface mesh and extrudes layers of high aspect ratio tetrahedra that transition to a more uniform mesh away from the body. The addition of T-Rex support for baffles (an existing Gridgen feature for resolving thin geometric surfaces) lets the user insert a triangulated surface mesh into the middle of the volume in the vicinity of a flow feature. T-Rex will extrude layers of tets from the baffle, thereby providing a fine mesh for accurately resolving the flow feature.

Also included in Gridgen V15.17 is further improvement of T-Rex's ability to combine, as a post-processing step, stacks of extruded tets into prisms to reduce cell count and thereby improve performance of the user's CFD solver. Specifically, this recombination now can be performed across boundaries in the grid's topology. In some cases, this has reduced the total cell count by 29.4 percent over previous versions of the software.

Pointwise, Inc. is solving the top problem facing engineering analysts today - mesh generation for computational fluid dynamics (CFD). The company's Gridgen and Pointwise software generates structured, unstructured and hybrid meshes; interfaces with CFD solvers, such as ANSYS FLUENT, STAR-CD, ANSYS CFX and OpenFOAM as well as many neutral formats, such as CGNS; runs on Windows (Intel and AMD), Linux (Intel and AMD), Mac and Unix, and has scripting languages that can automate CFD meshing. Large manufacturing firms and research organizations worldwide rely on Pointwise as their complete CFD preprocessing solution.

More information about Gridgen and Pointwise is available at [pointwise.com](http://pointwise.com).



[Click here to return to Contents](#)