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CIMdata News

The Beginning and Future of CIMdata's AEC & Manufacturing Convergence Consulting Practice: a Connect Press Feature

27 May 2016

"This past April, CIMdata, a leading independent worldwide firm, announced the launch of their AEC & Manufacturing Convergence consulting practice with Ed Martin at the helm.

CIMdata 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. 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.

The goal of the new consulting practice is to bridge the gap between manufacturing and the design, fabrication, and operation of facilities and ultimately reduce waste, budget, and timeline contingencies, improve compliance, quality, and the flow of information. They aim to work with industrial companies and software/service providers and draw on experience from CIMdata's more than thirty years of experience in the industry.

We were very excited to get the chance to sit down and talk with Martin about CIMdata's new endeavor and his role."

Read the article and interview with Ed Martin here:

http://www.catiacommunity.com/feature_full.php?cpfeatureid=116569

Community membership registration is free and provides access to a realm of pertinent news.

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Capgemini's Product Information Access Framework (Commentary)

1 June 2016

Key takeaways:

- Capgemini offers a custom solution to access product information across disparate data managed repositories
- Metadata search capabilities leverage Dassault Systèmes' EXALEAD solution

In order to fight increasing competition, industrial product companies allocate extensive time and budget to increase the productivity of their product development design process by installing the latest technology including up-to-date design software and strong computing IT infrastructures. Yet the "weak link" in the workflow of new product design—lack of effective search capabilities that enable part

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reuse—often goes ignored. Most product design companies maintain extensive repositories of released components and subassemblies that if reused in their current new product development can dramatically reduce time and cost. Capgemini[1], the consulting, technology, and outsourcing services company, offers their clients support for an effective metadata search across multiple, data-managed repositories. CIMdata views this capability as a strong positive for industrial companies who often have to work in a multi-provider solution environment.

Today, industrial product companies can find themselves developing products jointly with teams of designers either from partner companies or across multiple divisions within their own company which were obtained through acquisition. Those partnering organizations likely employ different PLM solutions and manage their data repositories with different data management solutions. Each will have different search capabilities and employ very different user interfaces, compounding the challenge of searching across multiple repositories. Because of those inherent complexities, designers often limit their search efforts or spend an inordinate amount of time and effort accessing only the deployed solutions with which they already work, ignoring information in other PLM and ERP repositories.

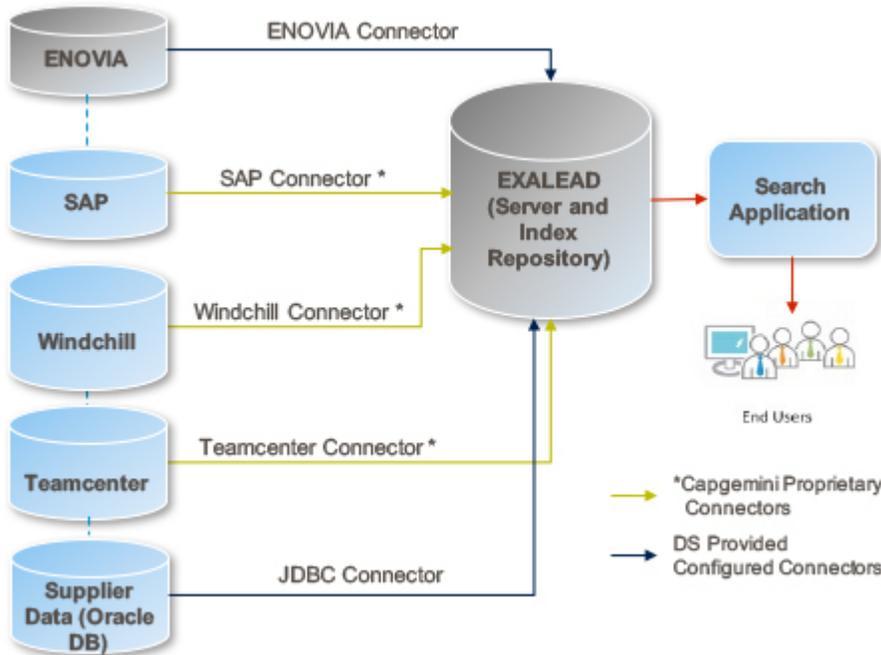


Figure 1—Architecture of Capgemini's Product Information Access Framework (Courtesy of Capgemini)

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System	Available	Provider
	✓	Dassault Systèmes
	✓	Capgemini
	✓	Capgemini
	✓	Capgemini

Recognizing this weak link in the design workflow, Capgemini has developed adapters for the major market PLM and ERP offerings that allow search access within their data repositories. The adapters include access for Teamcenter from Siemens PLM Software, Windchill for PTC, and SAP ERP from SAP SE. The Capgemini architecture can also allow access to other customer applications and data sources. Capgemini has structured an implementation that uses the EXALEAD[2] search capability together with the necessary adaptors (see Figure 1).

As a subsidiary product of Dassault Systèmes, EXALEAD already supports access to Dassault's data management solution, ENOVIA.

Capgemini is able to build a custom solution for a client based on their key parameter search needs that is architected to access any subset of the four primary data management solutions using a common user interface. Capgemini follows nine steps in scoping, designing, and implementing their Product Information Access Framework for an end user community:

1. Capgemini first works with the customer to understand their product information landscape and product information flow
2. Next, Capgemini defines single product information views to be created and identifies the attributes associated with these views
3. Capgemini works with the customer to understand the business rules and flow of critical attributes
4. At that point, Capgemini prepares the technical design of the implementation
5. Then configures CAD and other integrations to capture key critical attributes
6. Only then does Capgemini develop and configure data connectors and indexing in EXALEAD
7. Capgemini then configures the EXALEAD mash-up user interface which allows searches across the multiple data-managed repositories, without the need and complexity of learning and using different interfaces—working with the client, Capgemini refines the search reporting formats for ease of use
8. Extract and migrate sample data
9. Testing and Go-Live

CIMdata sees the common interface aspect of the implementation as an enabler for users, fostering its frequent use and agrees with Capgemini that the solution can form a backbone for a company's

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customized analytics and business applications.

The product information access framework from Capgemini drives organizations towards greater discipline in product data management by standardizing data elements located across the plethora of sources and tools. The implementation of the framework reveals several opportunities for business process improvement and application rationalization thereby accelerating the digital transformation of the enterprise.

New product development is challenging in today's competitive market. Industrial companies need to look at all aspects of the product development workflow for potential improvements. Often a win-win solution can be found where work productivity using a design tool is not just improved; work is eliminated by using a pre-existing solution. By having the proper search tools to identify and locate already released components that can be reused in the current in-development product companies gain the advantage of both time and money. For those companies who face the challenge of working across multiple, data-managed repositories, CIMdata believes they should investigate and consider the Capgemini solution. More information on Capgemini's Product Information Access Framework can be found by contacting marketing.pes.in@capgemini.com.

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CIMdata to Host Free Educational Webinar on Using Agile Methods to Speed Time to Value in a PLM Deployment

2 June 2016

In this free webinar participants will learn how Agile methodology can be used in PLM deployments to add significant benefits.

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces an upcoming free educational webinar, "Using Agile Methods to Speed Time to Value in a PLM Deployment." The webinar will take place on July 14, 2016 at 11:00 a.m. EDT and will share CIMdata's observations of clients using an Agile methodology for PLM deployment achieving benefits in line with those experienced by commercial software developers. Benefits include faster time to value, a higher quality solution, and improved user satisfaction.

According to the webinar host, CIMdata's Practice Manager for PLM Enterprise Value & Integration, Tom Gill, "Using Agile for PLM deployment does not eliminate the need for proper planning, but rather it enables the plan to be updated to better meet company needs as knowledge about PLM improves."

Tom Gill has over 25 years of experience applying computer-based solutions to engineering and manufacturing. Before joining CIMdata he worked as an independent PLM consultant, after spending over 20 years at high-volume manufacturing companies. He has worked on projects in numerous industries, including fabrication & assembly, food & beverage, defense, chemical, and medical devices and has executed PLM strategy projects, solution evaluation and selection projects, deployment planning, and training development for industrial clients.

The webinar will be an hour long and those attending will learn: how Agile software methodology can be successfully applied to a PLM deployment; more about the benefits the Agile methodology offers over legacy methodologies such as waterfall; and how Agile can improve quality, time to value, and lower the cost of a PLM deployment.

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The webinar will be useful to PLM sponsors, PLM program managers and directors, PLM product owners, engineering software application developers, PLM support teams, IT Operations, and anyone who wants to learn more about Agile methods.

During the webinar attendees will have the opportunity to ask questions about the topics discussed. To find out more, visit: <http://www.cimdata.com/en/education/educational-webinars/webinar-using-agile-methods-to-speed-time-to-value-in-a-plm-deployment>. To register for the webinar visit: <https://attendee.gotowebinar.com/register/2954779538459934210>

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 providers 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 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.

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CIMdata Publishes Executive PLM Market Report

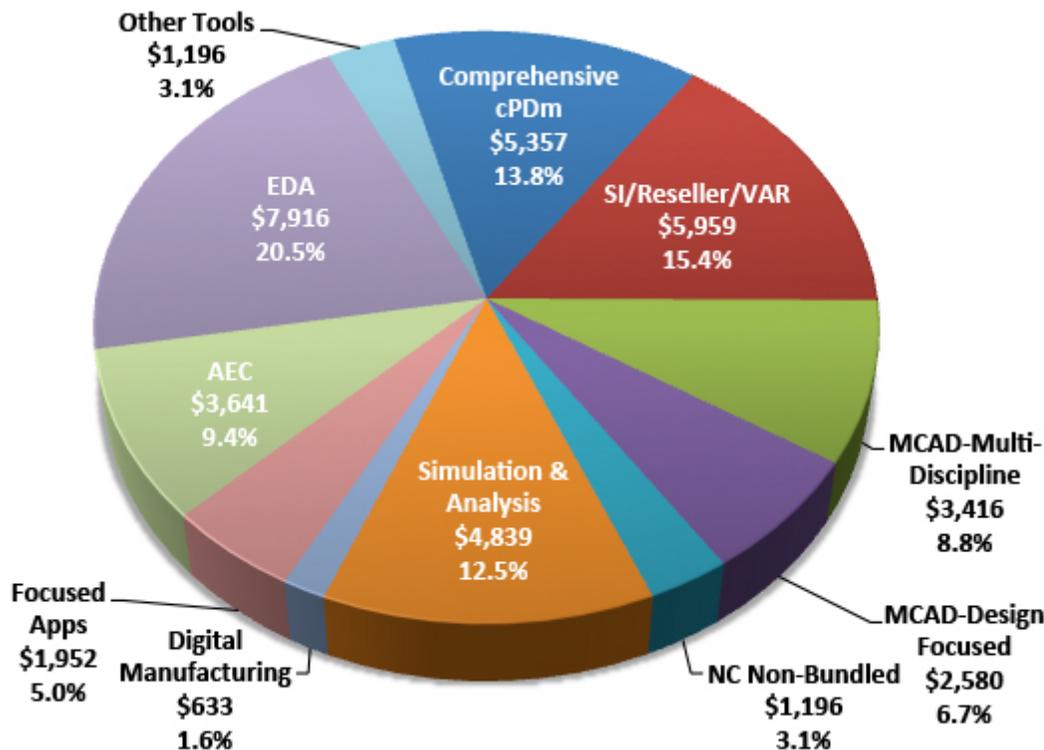
2 June 2016

CIMdata, Inc., the leading global PLM strategic management consulting and research firm announces the release of the CIMdata 2016 Executive PLM Market Report. This report provides an executive-level view of CIMdata's comprehensive analysis of the PLM market, with summary charts on the overall market and on specific PLM solution segments (including the chart below). It also includes perspectives on current trends in the PLM industry and how they may affect current suppliers and investments.

While the global economy has limped along since the slump in 2009, the PLM economy, as measured in our PLM market analysis, has continued to grow. In calendar year 2015, the PLM market grew to \$38.7 billion overall, 2.8% growth in U.S. dollars over 2014. When looked at in constant currencies (i.e., exchange rates that eliminate the effects of exchange rate fluctuations and that are used when calculating financial performance numbers), CIMdata estimated that the growth rate would be 8.2% over 2014. "The whole basket of currencies in which CIMdata measures PLM revenues was down against the U.S. dollar in 2014," according to Stan Przybylinski, CIMdata's Vice President of Research. "Since our analysis is done in U.S. dollars, the currency fluctuations brought down growth in each segment. CIMdata estimates that many segments saw double-digit growth in constant currencies, including collaborative Product Definition management (cPDm) focused applications, digital manufacturing, non-bundled Computer-Aided Manufacturing (CAM), simulation and analysis (S&A), and software development tools."

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This report is the first of five modules of the CIMdata 2016 Market Analysis Report Series to be released. The MAR Series provides detailed information and in-depth analysis on the worldwide PLM market during calendar year 2015. It contains analyses of major trends and issues; revenues of leading PLM providers; and revenue analyses for geographical regions, industry sectors, and historical and projected data on market growth.



The CIMdata PLM Market Analysis Report Series is packaged as five modules:

1. The CIMdata 2016 Executive PLM Market Report provides an overview of CIMdata's complete global analysis. It includes key charts on PLM market investment statistics through 2015, forecasts of investments for 2016 through 2020, and a summary of PLM solution providers' performance in 2015.
2. The CIMdata 2016 PLM Industry Review and Trends Report is mainly qualitative in nature, and focuses on key issues facing the global PLM ecosystem of solution providers and end user organizations. It highlights changes that occurred in 2015, what effects those changes may have in the short and medium term, and what is on the horizon in the years to come.
3. The CIMdata 2016 PLM Market and Solution Provider Analysis Report details measures of and forecasts for the overall PLM market and its key segments, including Tools, cPDM, and Digital Manufacturing. The Tools section has additional details on sub-segments, including MCAD, NC, S&A, EDA, and AEC. It also includes CIMdata's estimates of PLM solution provider revenues in these segments and sub-segments for 2016 through 2020.
4. The CIMdata 2016 PLM Market Geographic Analysis Report provides an additional view of the 2015 market results, by major geography. CIMdata's 2015 estimates and market forecasts for

CIMdata PLM Industry Summary

PLM and the major PLM market segments are provided for the Americas, EMEA, and Asia-Pacific. In addition, the report includes estimates and forecasts for the cPDm segment within specific European and Asia-Pacific countries and regions.

5. The CIMdata 2016 PLM Market Industry Analysis Report provides an industry segmentation view of the 2015 market results. CIMdata's 2015 estimates and market forecasts for PLM and cPDm are provided for eight different industry sectors: aerospace and defense; automotive and other transportation; electronics/telecommunications; fabrication and assembly; process-packaged goods; process—petrochemical; utilities; and construction, infrastructure and shipbuilding.

The CIMdata PLM Market Analysis Report Series is available as a five-module set or each module can be purchased separately. It is also available as part of the CIMdata PLM Community Gold Membership. Further details and pricing information about the report and Community Memberships are available at www.cimdata.com.

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Acquisitions

Accenture Completes Acquisition of OPS Rules, Enhances Its Machine Learning and Operations Analytics Capabilities for Clients

26 May 2016

Accenture has completed its acquisition of OPS Rules, a boutique analytics consulting company that specializes in the application of data science to create supply chain and operations analytics solutions. The acquisition enhances Accenture's machine learning and operations analytics capabilities that can be used to develop innovative and transformational solutions for clients across industries.

In addition to joining Accenture Analytics, OPS Rules will be a part of Accenture's Data Science Center of Excellence (CoE), a global innovation team that focuses on solving immediate and complex client problems through advanced analytics approaches, including machine and deep learning. While in the CoE, OPS Rules will be focused on developing pioneering analytics solutions that can help clients to establish more effective supply chain and manufacturing operations.

OPS Rules' data science experts – which includes David Simchi-Levi, a Professor of Engineering Systems at the Massachusetts Institute of Technology (MIT) and renowned supply chain and operations analytics expert – have experience in applying machine learning and optimization techniques to provide multi-echelon inventory optimization, custom supply chain analytics, supply chain risk management and dynamic pricing services.

“Our clients are increasingly asking us for innovative analytics solutions that involve advanced techniques like machine learning, so they can find new ways to experiment with their data and skillfully maneuver ahead of the competition,” said Narendra Mulani, chief analytics officer, Accenture Analytics. “The addition of OPS Rules' sophisticated talent and David Simchi-Levi's decades of operations analytics experience will expand our end-to-end analytics capabilities and enhance our ability to leverage machine learning techniques and optimize business operations for clients around the globe.”

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Dassault Systèmes Extends the 3DEXPERIENCE Platform to Supply Chain Planning and Operations

2 June 2016

Dassault Systèmes today announced the signing of a definitive share purchase agreement to acquire Ortems, a key provider of on-premise and on the cloud capacity constraint-based production scheduling and dispatching software.

The acquisition of Ortems, based in Lyon, France, will extend Dassault Systèmes' 3DEXPERIENCE platform and its industry solution experiences for next generation manufacturing, supply chain and delivery, by reinforcing production planning and scheduling along with DELMIA Quintiq supply chain planning and optimization capabilities, in order to plan, execute and optimize global industrial operations in manufacturing industries. Ortems complements Dassault Systèmes' DELMIA brand applications, including DELMIA Apriso, which offer a unified experience to all users in digital manufacturing, manufacturing operations management, and supply chain planning and operations, built on a single referential data model.

Ortems' Agile Manufacturing and PlannerOne solutions are used in the manufacturing operations management of smart factories, where a highly synchronized manufacturing IT system supports the link between virtual design and physical production. More than 16,000 users in 60 countries at aerospace, automotive, industrial equipment, high-tech, life sciences, packaging and consumer goods industrial companies, use its solutions to schedule their daily production runs. Customers include AIA, Almirall, Courvoisier, Depuy, Eckes Granini, Europastry, GE Power, Givaudan, Heineken, Knauf, Mecaplast, Merck Serono, Nexans, Monin, Sanofi, Sidel, Solvay and Thalès. Ortems' 2015 revenue was close to 5 million euros.

“The art of manufacturing today means constantly inventing and reinventing. Advanced innovation and collaboration platforms that bring together great minds, ideas, solutions and information make this possible,” said Bernard Charlès, President & CEO, Dassault Systèmes. “In just over a decade, Ortems' highly talented team has developed an ecosystem of technology, customers and partners in this specialized segment for large and midsize companies. We welcome Ortems' contribution to the 3DEXPERIENCE platform as we complement and extend the manufacturing experience for our customers.”

Manufacturing plants are inherently unstable due to machine stoppage, workforce and skills shortage, changing orders and supply chain disruptions. Ortems provides scheduling decision support tools to absorb the complexities of a business and to produce the optimum schedule based on unlimited “what if” simulations, instantaneous interactive modifications, impact analysis and exception management to support demand and short- and mid-term production schedules. Users can automate, optimize, compare production schedules to meet delivery dates, and increase resource utilization and profitability.

“Ortems is a cornerstone of business transformation to become more agile and demand-driven while optimizing cash and assets, as well as an effective answer to the challenge of tier one suppliers to continuously synchronize flows with OEM manufacturers' assembly line requirements,” said Frédéric Marcotte, Supply Chain Senior Manager, Mecaplast Group. “Mecaplast Group chose Ortems in order to standardize and optimize the production scheduling process across our 26 automotive equipment plants in 18 countries. Following a first step defining and validating the core model in one of our facilities in

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Spain, 15 plants on three continents have already been successfully deployed in only 10 months.”

“Manufacturers in both discrete and batch industries face critical challenges due to increased globalization, and seek to stay ahead in a global competitive market through digital transformation,” said René Desvignes, President & CEO, Ortems. “As part of Dassault Systèmes, we can bring a unique manufacturing operations management portfolio to the market that closes the loop between process design and production execution on the shop floor, and supply chain planning in global industrial operations. Manufacturers can respond rapidly to constantly changing customer requirements by enabling agile manufacturing strategies with more flexible, connected, sustainable and smart factories.”

“Advanced planning and scheduling with constraints-based optimization is a critical component for capturing increased value from a manufacturing execution system and manufacturing operations management implementation. Our research shows that it can improve on time delivery significantly,” said Matthew Littlefield, President and Principal Analyst, LNS Research. “The Ortems acquisition by Dassault Systèmes is a clear continuation of its strategy to extend beyond manufacturing simulation and address the complete set of execution and planning requirements of manufacturing customers. LNS Research expects Ortems to be synergistic with its other recent acquisitions, including Apriso and Quintiq.”

“Three years ago, Airbus Helicopters selected Ortems as its backbone system for planning under constraint,” said Xavier Mathias, Industry and Procurement Business Applications Leader, Airbus Helicopters. “After several implementation projects in various functional domains around the same application instance, Ortems is fully integrated in our information systems landscape, strongly connected to SAP ERP. From sales and operations planning to daily manufacturing operations, soon Ortems will be our single tool supporting our challenges around planning optimization.”

This transaction was completed on May 31, 2016.

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OpenText Signs Definitive Agreement to Acquire Recommind, Inc.

2 June 2016

Open Text announced today that it has entered into a definitive agreement to acquire privately-held Recommind, Inc., a leading provider of eDiscovery, and information analytics. Recommind’s SaaS and managed services solutions include, Axcelerate for eDiscovery review and analysis, Perceptiv for contract analytics and Decisiv for enterprise-wide information access.

With this acquisition, Recommind’s market-leading eDiscovery solution will complement OpenText’s own leading enterprise information management (EIM) solutions. In addition, this acquisition is expected to expand OpenText’s expertise in cloud and developing and using analytics to solve concrete and expensive business problems.

Terms of the Agreement

The transaction purchase price is approximately \$163 million. The solutions being acquired are expected to generate between \$70m and \$80m of annualized revenues, be immediately accretive to earnings and be on the OpenText operating model within the first 12 months after closing. The transaction is expected to close in the first quarter of fiscal 2017 and is subject to customary regulatory approvals and closing conditions. (1)

More information can be found in our presentation at investors.opentext.com.

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SGS acquires 20% stake of Transparency-One, the supply chain risk management platform

30 May 2016

Transparency-One, the supply chain risk management platform, today announced that SGS, a leading inspection, verification, testing, and certification company, has acquired a 20% stake in the company. The company's financing is led by Jerome Malavoy, former founder and CEO of Trace One with participation from SGS. The investment coincides with the spinoff of Transparency-One from Trace One, a leader in private label product lifecycle management (PLM) software.

Consumer Demands for Supply Chain Transparency

In nearly every market segment, consumers and governments are demanding greater supply chain transparency. Increased demand for a larger, more diverse set of consumer products has resulted in a complex and globally dispersed supply chain. The result is a rise in issues of product safety, product fraud, and social responsibility.

Consumers are demanding more information and accountability from brands. Governments have responded with stringent regulations forcing more disclosure of product and supplier information. The combination of factors has created a "perfect storm" – resulting in the urgent need for a transformative approach to managing supply chain transparency.

Brands have Limited Visibility Below their Tier 1 Suppliers

Most brands know their immediate suppliers – but not the full supply chain down to the raw material. This opaque part of the supply chain is often where problems occur. Transparency means knowing the network of suppliers, ingredients/components, and facilities in the entire supply chain down to the raw materials. It means understanding the certification compliance, country of origin, and production environment at every stage in the process.

Transparency-One Platform for Supply Chain Visibility and Risk Management

Transparency-One maps the entire supply chain, tracks compliance, and provides analytics to proactively manage business risks. It helps companies interconnect and share meaningful product and facility data. Transparency-One leads the market with cutting edge graph database technology combined with global supplier onboarding services. "Transparency-One's offering is well-timed with the rapidly increasing demand for supply chain transparency" said Jerome Malavoy, founder and Executive Chairman.

"We believe the market will continue to digitize supply chain information to help diagnose and mitigate risks. The expertise that SGS can offer together with the Transparency-One platform will help ensure safe supply chains and protect our customers' brands" said Francois Marti, EVP at SGS. "Transparency-One is a powerful platform for the industry and we are excited to collaborate with them as they build a great company."

Chris Morrison, formerly Chief Marketing Officer of Trace One will assume the role of Chief Executive Officer of Transparency-One. "As an industry we're just beginning the journey of how supply chain risk management can impact brands and consumers," said Morrison. "Having the financial support and

domain expertise of SGS will help us execute our vision even more rapidly and broadly."

Transparency-One enables companies to discover, analyze and monitor all suppliers, ingredients and facilities in the entire supply chain. Transparency-One combines cutting edge graph database technology, supply chain expertise, and global supplier onboarding services to help all supply chain stakeholders reduce business risk. The company is based in Boston, Massachusetts with offices in Paris, France.

SGS is the world's leading inspection, verification, testing and certification company. SGS is recognized as the global benchmark for quality and integrity. With more than 85,000 employees, SGS operates a network of over 1,800 offices and laboratories around the world.

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Company News

Dassault Systèmes Awarded Best Supplier by Group PSA

30 May 2016

Dassault Systèmes today announced that it was honored by Group PSA with the Value Creation Product and Services award at Group PSA's 12th annual Best Supplier Awards event held in Poissy, France. The award celebrates suppliers that are fully engaged in their relationship with Group PSA and that demonstrate the deepest understanding of the company's expectations and the most proactive ability to meet them. Dassault Systèmes was recognized for its 3DEXPERIENCE platform as a key enabler of the digital transformation of Group PSA's global research and development.

As part of its strategy to create new customer experiences in the coming decades, Group PSA decided to rethink the processes and organization behind its Peugeot, Citroën and DS brands' vehicle development. Growing product complexity and its global enterprise with a network of suppliers and partners necessitated a worldwide R&D approach.

After a thorough evaluation of key market players, Group PSA turned to Dassault Systèmes to enhance the efficiency of common business processes and improve global collaboration among 13,500 people at nine R&D, technical and testing facilities in China, Europe and South America. Based on the 3DEXPERIENCE platform, the "Modular Glocal and Secure" and "Smart Safe and Connected" industry solution experiences help Group PSA simplify and master complexity across vehicle programs, teams and locations, and create intelligent, safer and integrated vehicles whose styles and technologies are adapted to local markets.

"Dassault Systèmes has been a partner and supplier to Group PSA for many years and is now accompanying us as we integrate our complete PLM process to optimize our engineering activities," said Gilles Le Borgne, Vice President R&D, Group PSA. "The 3DEXPERIENCE platform covers the complete product development cycle and enables us to reuse system components across multiple vehicles and platforms, which increases our internal R&D efficiency, quality and reliability. This Best Supplier Award reflects that several Group PSA projects are already underway and seeing the first savings from this digital transformation."

The 3DEXPERIENCE platform provides a unified digital environment to create, manage, share and capitalize information throughout a product's lifecycle. Internal and external stakeholders have secure, consistent and up to date access to product data that is aligned with common processes and deliverables.

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Group PSA can ensure efficient development processes based on configuration management and modularization as well as reliably monitor development activities for safety and regulation compliance.

“We are delighted to receive this award from our long-term customer Group PSA as we collaborate to innovate in new mobility experiences,” said Olivier Sappin, Vice President, Transportation & Mobility Industry, Dassault Systèmes. “Group PSA is working to optimize and expand its customer base through digital innovation and the 3DEXPERIENCE platform brings added value to this strategy with a single source of the truth. Seamless product and project management with key markets like China helps reinforce product quality, reliability and customer relationships.”

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Hexagon Manufacturing Intelligence North America Launches Integrated Solutions Strategic Business Unit

31 May 2016

Hexagon Manufacturing Intelligence North America today announced the launch of their new Integrated Solutions strategic business unit, dedicated to Smart Factory systems for advanced manufacturing. This highly-specialized team will develop automated commercial-off-the-shelf (COTS) systems by integrating Hexagon's 3D measurement technologies with sensors, software, and robotics. These data-driven automation solutions will deliver actionable information for predictive manufacturing in a connected Industry 4.0 environment. With on-demand access to real-time factory floor data, operators and managers will be able to monitor, troubleshoot and control production processes at an unparalleled level.

The Integrated Solutions team is also developing new-to-market solutions featuring robotics integrated with world-class metrology technologies. These in-line, near-line or off-line measurement work cells will be scalable, portable, modular and ready for use on the modern shop floor. The Smart Factory systems will continuously collect and process data during production operations, providing speed and confidence for fast decision-making and rapid responses to shop floor issues. Manufacturers will be able to easily adopt these configurable, automated work cells into their production space.

"The Integrated Solutions strategic business unit is harnessing the core strengths of Hexagon Manufacturing Intelligence and leading the way toward the Smart Factory. As manufacturers advance toward Industry 4.0, they don't have to go it alone," states Jeff Perry, Director of Integrated Solutions, Hexagon Manufacturing Intelligence. "The Integrated Solutions team is focused on engineering metrology-assisted automation solutions based on Hexagon's proven hardware and diverse software portfolio, as well as our vast, worldwide technical support network. These innovative COTS systems will serve the needs of forward-thinking customers transitioning to smart production for greater productivity and the compelling cost savings derived from using real-time data."

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Improve Profitability by Managing Engineering Escapes – ITI White Paper Now Available

1 June 2016

International TechnoGroup Incorporated (ITI) today introduces a white paper outlining seven recommendations to help manufacturers develop a strategy to improve profitability by managing engineering errors, changes and escapes.

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Engineering escapes happen as a result of routine product data exchange throughout the lifecycle and across the supply chain. Escapes are typically very costly in terms of labor waste, material, and part scrap, assembly errors, and manufacturing delays; but escapes are often not thoroughly or accurately identified and measured.

Over the past 15 years, ITI consulting projects revealed that engineering changes throughout the product lifecycle result in engineering escapes, or “unidentified changes to 3D product data that lead to a negative economic consequence.”

Traditionally, the management of engineering escapes, changes and errors has been viewed as an opportunity to reduce costs. Many authors and industry experts have written on the topic, including Ed Lopategui, Michael Grieves, Dean Beutel, Donald G. Reinertsen, and Frank B. Watts. In this paper, ITI’s EVP of Business Development, James Flerlage, proposes that managing engineering escapes should be viewed as a legitimate profit center that proactively adds to the bottom line, and should be a priority for any manufacturer that is using 3D models and Model Based Definition (MBD).

“It’s time for manufacturers to stop accepting that losses from escapes and engineering changes are a natural part of the product development process. With a diligent process, committed leaders, and the technology that is available today, \$5M to \$100M can be added to the bottom line, depending on the program size” states Flerlage, author of the white paper.

“This topic is important to ITI because we are in the business of helping companies move, validate, access and use their 3D data,” added Tom Gregory, CEO, ITI. “As such we are witness to a wide variety of manufacturers and their processes, and thus have insights and solutions for managing changes to 3D data upstream, before engineering changes become escapes, errors or lost revenue, and when they are much more cost-efficient to address.”

Doug Cheney, ITI expert on 3D product data variation and validation, adds, “If you expect downstream users to rely on the model to make decisions that not only affect their function, but also their livelihoods, then you have to consistently produce CAD models that are reliable. The engineers I know don’t want to make mistakes. A proven, automated, non-disruptive solution for identifying 3D CAD model variation and communicating change upstream is essential to winning user trust and eliminating unprofitable work processes.”

“Unless these issues are addressed, escapes will still mean lost or missed revenue,” adds Flerlage. “As organizations explore whether or not addressing ‘engineering escapes’ is worthy of time or resources, perspective must shift. Manufacturers must view the engineering change process as a potential profit center rather than accept that such losses are a natural part of the product development process.”

This white paper explains the origins and realities of 3D product data engineering changes and offers organizational insights, a labor cost savings formula, and initial steps to minimize the escapes in 3D product data that compromise product data quality.

The white paper can be downloaded here: <http://hubs.ly/H035Jtk0>

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intrinSIM and Ora Research to Collaborate on Simulation Market Research

3 June 2016

intrinSIM and OraResearch, a leading market research firm in the engineering software space, have established a collaboration to research, report and advise on simulation market. The joint intrinSIM/Ora Research projects will seek to identify emerging CAE market segments that are creating high value for initial adopters, but to date have been under-recognized, under-covered by press and industry analysts, and under-adopted relative to their potential value for engineering organizations. Through early identification, study, analysis and documentation of these emerging new CAE market segments and adjuncts, we hope to accelerate their recognition, adoption and growth, thus strengthening those segments for both engineering practitioners and technology providers.

The first joint project is already underway and aims to analyze and quantify the market for design space exploration, design optimization and simulation process automation software technologies. This market has been growing rapidly in importance and revenue in recent years and has reached a point where it warrants a separate study of the current status, trends and dynamics. intrinSIM and Ora Research have been working together to provide insights into this emerging market and will release results of this research project shortly.

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Mentor Graphics Customers Expand Use of Calibre Pattern Matching to Tackle Toughest IC Verification and Manufacturing Problems

1 June 2016

Mentor Graphics Corporation today announced that customers and ecosystem partners are expanding their use of Calibre Pattern Matching solution to overcome previously intractable IC verification and manufacturing problems. The solution is integrated into the Mentor® Calibre nmPlatform solution, creating a synergy that drives these new applications at IC design companies and foundries, across multiple process nodes.

Calibre Pattern Matching technology supplements multi-operational text-based design rules with an automated visual geometry capture and compare process. This visual approach is both very powerful in its ability to capture complex pattern relationships, and to work within mixed tool flows, making it much easier for Mentor customers to create new applications to solve difficult problems. Because it is integrated into the Calibre nmPlatform toolset, the Calibre Pattern Matching functionality can leverage the industry-leading performance and accuracy of all Calibre tools and flows to create new opportunities for design-rule checking (DRC), reliability checking, DFM, yield enhancement, and failure analysis.

“Our customers count on eSilicon’s design services, IP, and ecosystem management to help them succeed in delivering market-leading ICs,” said Deepak Sabharwal, general manager, IP products & services at eSilicon. “We use Calibre Pattern Matching to create and apply a Calibre-based yield-detractor design kit that helps identify and eliminate design patterns that impact production ramp-up time.”

Since its introduction, use models for Calibre Pattern Matching technology have rapidly expanded, solving problems that were previously too complex or time-consuming to be implemented. New use

cases include the following:

Physical verification of IC designs with curved structures—for analog, high-power, radio frequency (RF) and microelectromechanical (MEMS) circuitry—is extremely difficult with products designed to work with rectilinear design data. Calibre customers are automating that verification using a combination of Calibre Pattern Matching technology and other Calibre tools for much greater efficiency and accuracy, especially when compared to manual techniques.

Calibre Pattern Matching technology can be used to quickly locate and remove design patterns that are known or suspected of being difficult to manufacture (“yield detractors”). Foundries or design companies create libraries of yield detractor patterns that are specific to a process node or a particular design methodology. Samsung Foundry used this approach in its Closed-Loop DFM solution to help its customers ramp to volume faster, and reduce process-design variability.

Some customers use Calibre Pattern Matching technology with Calibre Auto-Waivers™ functionality to define a specific context for waiving a DRC violation. This enhancement allows for automatic filtering of those violations for significant time savings and improved design quality.

“To help our customers create manufacturing-ready designs, we use Calibre Pattern Matching to create and use a yield detractor database to fix most of the litho hotspots in the block level. Then we perform fast signoff DFM litho checking at the chip level using an integrated solution with Calibre Pattern Matching and Calibre LFD” said Min-Hwa Chi, senior vice president, SMIC. “By offering a solution for manufacturability robustness that is built on the Calibre platform, we are seeing ready customer adoption of SMIC’s DFM solution.”

With the Calibre Pattern Matching tool, design companies can now optimize their physical verification checking to their unique design styles. The tool is easy to adopt because it doesn't rely on expertise in scripting languages. Instead, any engineer can readily define a visual pattern that captures the designer's expertise in the critical geometries and context for that configuration.

“With the growing adoption of Calibre Pattern Matching technology, Mentor continues to help our customers address increasing design complexity, regardless of the process node they are targeting,” said Joe Sawicki, vice president and general manager of the Design-to-Silicon division at Mentor Graphics. “By incorporating the Calibre Pattern Matching tool, the Calibre platform becomes an even more valuable bridge between design and manufacturing for the ecosystem.”

At the 2016 Design Automation Conference, Mentor has a Calibre Pattern Matching presentation on Tuesday, June 7 at 3PM in the Mentor booth #949.

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The Ministry of Science and Technology, NSTDA, and Autodesk Join Hands to Advance Digital Manufacturing in Thailand

25 May 2016

The National Science and Technology Development Agency (NSTDA), the Ministry of Science and Technology, and Autodesk today signed a Memorandum of Understanding (MOU) to help advance Thailand’s manufacturing competitiveness through industry-wide adoption of leading edge 3D technologies and digital manufacturing capabilities.

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“Thailand will need to adapt in this 21st century world from a Thailand 3.0 model to a ‘Thailand 4.0 model’, in order to advance Thailand further into a developed country. This is to support Thailand in changing from a country with ‘middle income’ to ‘high income’, moving the economy from one that operates on ‘performance’ to one that progresses through ‘innovation’. One of the initiatives and mechanisms for moving into an economy of Thailand 4.0 is through the use of technology in Industry 4.0, which will adopt the greater use of digital technologies in manufacturing. A special element of this is the ability to directly connect the needs of consumers to the manufacturing process, which implies that larger factories would not necessarily be a competitive edge or limitation for operators any longer. This phenomenon will indeed have an immense impact on the economy’s infrastructure,” said Dr. Pichet Durongkaveroj, Minister of Science and Technology.

“Through the cooperation of world leading companies like Autodesk with the NSTDA, this will support local SMEs in using digital technologies in their design and manufacturing processes, as well as elevating the capabilities of Thai talent to be ready for the manufacturing industry of the future. Moreover, this leads to the creation of value in industries, which coincides with the policy objectives of the government, such as in the biotechnology industry, renewable energy, engineering and design industries related to enhancing the quality of life, and the creative economy industry, which will strengthen the country further,” added Dr. Pichet Durongkaveroj, Minister of Science and Technology.

NSTDA, under the Ministry of Science and Technology, and Autodesk will aim to jointly establish a ‘Digital Manufacturing Platform’ in support of the National Digital Economy Master Plan. This will provide up to 100,000 engineers and vocational professionals from companies of all sizes with subscription-based access to Autodesk’s 3D design, manufacturing, simulation, and collaboration tools, services and training for three years.

“Manufacturing is critical to our economy. Digital manufacturing technologies and talent development will propel Thailand forward in a highly competitive market. The Digital Manufacturing Platform powered by Autodesk technologies will help local players increase the pace of innovation, and promote connectivity and collaboration in alignment to the government’s Digital Economy goals,” said Dr. Thaweesak Koanantakool, President, The National Science and Technology Development Agency (NSTDA).

Two key technologies within the Digital Manufacturing Platform are Autodesk’s [Fusion 360](#) and [A360 Team](#). Fusion 360 brings together computer-aided design, manufacturing and engineering (CAD, CAM and CAE). Available for Mac, PC or mobile, Fusion 360 is an integrated, connected, and accessible tool built for the new ways products are being designed and made. It also provides the context to understand all aspects of a project and collaborate with everyone participating through the use of A360. A360 modernizes the way people work together and captures all project information and activity, giving teams a central place to collaborate.

“Technologies like the Internet of Things, augmented and virtual reality, robotics and additive manufacturing are disrupting the industry. The Digital Manufacturing Platform gives local talent and companies the tools to transform every link in the manufacturing value chain, and the opportunity for Thailand to lead in the Future of Making Things,” said Mr. Rama Tiwari, Regional director of sales, Autodesk ASEAN.

The Digital Manufacturing Platform is one of several initiatives in the on-going collaboration between NSTDA and Autodesk to support Thailand’s Digital Economy. Other areas of focus include joint research programs and building the technology platform to support the nation’s Smart Cities initiatives.

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PTC and ModuleWorks Develop Integrated Simulation for PTC Creo

31 May 2016

ModuleWorks and PTC have developed an integrated material removal simulation for the PTC Creo product development software suite.

The integrated ModuleWorks components enable PTC to offer state-of-the-art material removal simulation and verification as part of the PTC Creo Parametric software. The simulation window is implemented directly in the PTC Creo user interface to ensure a familiar look and feel for end users. The ModuleWorks simulation technology provides multi-axis milling and turning simulation with gouge and deviation analysis as well as collision checking and manual or automatic refinement of the simulation result. Workpiece coloring according to the sequence or the tool provides enhanced visual analysis at a glance. The resulting triangulated model is available to the rest of the PTC Creo suite for seamless and efficient product analysis and development.

Commenting on the integration project, David Plater, Technical Director at ModuleWorks says “The results of this project highlight the benefits of close collaboration to develop an integrated simulation in a CAM system. Over the coming years I am sure we will see even greater benefits from this cooperation and the advancement of the technology.”

And as Jose Coronado, PTC Creo Product Manager explains, “Excellent communication between the project teams allowed a flexible, open and agile approach that has enabled us to greatly accelerate the development of our PTC Creo Manufacturing tools by adding this outstanding material removal simulation functionality.”

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Reimagining the Packard Plant with Trimble and Microsoft Mixed-Reality Technologies

27 May 2016

Trimble announced today that architect [Greg Lynn](#) used its mixed-reality technology and Microsoft HoloLens to re-imagine and design the Packard Plant—the historic, abandoned automobile factory in Detroit. The architectural project was commissioned as part of the U.S. Pavilion and will be featured at the 2016 Venice Biennale exhibition in Italy from May 28 through November 27.

Detroit's Packard Plant Transformed – The Center for Fulfillment, Knowledge and Innovation

The Center for Fulfillment, Knowledge and Innovation is Greg Lynn's re-imagination of the historic Detroit Packard Plant. The new complex combines a transport hub, industrial park, factory and university to transform the Packard Plant by incorporating innovations in robotic manufacturing, autonomous transportation and online retail. The architecture of the new complex prioritizes flow, movement and processing—an interconnected network of products, people, robots and ideas. The design evolved through the use of Trimble's mixed-reality technology and Microsoft HoloLens.

The historic buildings' first two floors house inventory including an online retail fulfillment center, a food port, an autonomous livery-car depot and an aerial-drone port. The upper level consists of four corporate research centers and an auditorium/convention center. The entire complex is anchored by two five-story university satellite buildings, connected on the fourth level by a walkway that supports four

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reconfigurable collaboration spaces that can be moved and docked adjacent to research and conference centers seasonally. Below the research park and above the fulfillment center is a 1.7-mile-long logistics-drone superhighway that links the 25 existing elevator cores on the site to create an efficient thoroughfare for the intelligent movement of goods, equipment and materials.

Design and Collaboration Scenarios

Using Microsoft HoloLens and Trimble technology, Greg Lynn was able to experience his 3D models as holograms placed in the real world. The technology enabled him to quickly analyze various "what if" design scenarios in the context of the physical environment, improve team collaboration and shorten the design cycle.

To see Greg Lynn's experience, visit: <https://youtu.be/70xDCokzAck>.

"Trimble mixed-reality technology and Microsoft HoloLens bring the design to life and bridge the gap between the digital and physical. Using this technology I can make decisions at the moment of inception, shorten the design cycle and improve communication with my clients," said Greg Lynn.

"Mixed reality releases 3D digital models from the constraints of 2D screens into the real world. It is a shift from information communication to experiencing communication. The technology transforms the way our customers consume, interact and communicate data," said Aviad Almagor, director of Trimble's Mixed-Reality Program. "Mixed reality is a revolutionary change, bringing a completely different way to interact with data."

Trimble and Microsoft

Trimble is collaborating with Microsoft to develop a new generation of tools, integrated with the [HoloLens](#) holographic platform on Windows 10, which are intended to improve quality, collaboration and efficiency in the design, construction and operation of buildings and structures.

Microsoft HoloLens is a head-mounted, holographic computer that provides a mixed-reality experience for a range of commercial and consumer applications. When used by Architecture, Engineering and Construction (AEC) professionals, the HoloLens device extends interaction with 3D models beyond the confines of a 2D computer screen, creating new ways for the many stakeholders of complex, multi-phase construction projects to visualize, collaborate, share ideas and manage change.

Additional information on the Trimble and Microsoft collaboration is available at: <http://buildings.trimble.com/hololens>.

About Greg Lynn

Greg Lynn is the owner of Greg Lynn FORM office and a professor at the UCLA School of the Arts and Architecture. He was the winner of the Golden Lion at the 2008 Venice Biennale of Architecture, and in 2010 Lynn was named a fellow by the United States Artists.

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RIB Software AG (RIB) and Wipro Limited partner to deliver end-to-end Advanced enterprise 5D BIM Construction Management solution

29 May 2016

RIB Software AG, a technology leader in Integrated enterprise 5D BIM and Construction management solutions using BIG Data and Cloud Computing, today announced a global alliance with Wipro Ltd.

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(NYSE:WIT), a leading global information technology, consulting and business process services company. Wipro will leverage RIB's iTWO software suite to provide a spectrum of services, ranging from consulting, implementation and managed services to formulate and execute strategy, monitor and improve efficiency in Energy, Utilities, and Engineering & Construction industries.

Wipro and RIB intend to establish a strategic partnership cooperation to jointly transform the global construction industry into the most advanced industry in the world by iTWO new thinking, new working and new technology and Wipro's technology expertise and portfolio of services. RIB provides the world's leading web-based 5D BIM iTWO technology and Wipro provides consulting, SI and professional services to global clients over Wipro's and RIB's network. Wipro's competencies in delivering end-to-end BIM solutions combined with RIB's market-leading innovative iTWO 5D BIM construction management solution, will widen the scope and scale of visualization solutions offered to customers.

Commenting on the partnership, Sahadev Singh, Vice President and Global Head - Engineering & Construction, Wipro Limited said, "BIM Data Visualization enables faster and better decision making for E&C businesses and that is the reason why organizations across the globe are investing in newer and more sophisticated BIM enabled construction Management solutions that incorporate visualization tools. RIB iTWO is a great platform. Wipro's BIM & VDC digital transformations offerings for engineering and construction industry, powered by RIB iTWO platform, coupled with our global services network and implementation expertise will help us to deliver increased value and higher ROI to our customers."

"With this strengthened alliance, we are focused on building and delivering solutions and services that are the foundation for the deep insight necessary to make the promise of agile business a reality."

Commenting on the partnership, Thomas Wolf, Chief Executive Officer RIB Group said, "Innovation Transformation Management is the supreme discipline and the key for a successful iTWO implementation. We have chosen Wipro as our global partner because Wipro is named as the world's most ethical company in 2016 and we believe in strategic partnerships with global visionaries combined with strong and fast acting top management. iTWO stands for the integration of the TWO worlds, the virtual into the real world. The joined iTWO Technology and Wipro IT services offer enables our society now to contribute faster to build the next generation of cities and infrastructure suitable for the digital and knowledge age needs. My target is to build together with the Wipro team a 1000 thought leader iTWO social community in the next years to support our children with the next generation of living."

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Stratasys Announces Retirement of David Reis as CEO

2 June 2016

Stratasys Ltd today announced that David Reis has decided to step down from his position as the Chief Executive Officer, effective June 30, 2016.

During his tenure as CEO, David Reis led the successful merger and integration of Stratasys and Objet, and oversaw the strong growth that has established Stratasys as an industry leader. Mr. Reis also initiated the company's recent transformation, as it developed a broad, solutions-based business model that targets new manufacturing applications across key vertical markets.

While he has announced his plans to retire as CEO, Mr. Reis will remain a member of

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the Stratasys board of directors as an Executive Director.

"The board of directors is grateful for David's seven years of service as CEO to Stratasys and Objet," said Elan Jaglom, Stratasys' Chairman of the Board. "David has shown strong dedication to our customers and employees, while guiding the company through a period of extraordinary growth. He is also responsible for initiating a critical business transformation designed to support our long-term leadership in the prototyping market while expanding into applications for manufacturing. The board looks forward to working with David in his capacity as Executive Director and to the value he will provide in supporting our long-term strategy."

Effective July 1, Ilan Levin, a member of the Board and Executive Committee of Stratasys, will assume the role of CEO.

Mr. Levin has served as a member of the Board of Directors of Objet since 2000 and served as President and Vice Chairman of the Objet Board prior to the Stratasys-Objet merger in 2012. Mr. Jaglom remarked, "Speaking on behalf of the whole Board, we are confident that Ilan's understanding of the company's business and strategy will enable him to build upon Stratasys' market position, foster a smooth transition and successfully advance the company's strategic vision."

"It has been a privilege to lead Stratasys and its very talented team during a truly transformative period for our company and industry," said Mr. Reis, Stratasys' outgoing CEO. "The time has come to transition leadership, and I am extremely pleased to have a highly-capable successor who has extensive knowledge of all aspects of Stratasys, including our technologies, markets and strategic roadmap. Ilan is an additive manufacturing pioneer, and has been a key figure in our industry for many years. I am confident in his ability to conduct a seamless transition and lead our company into the future."

Mr. Levin said, "I am honored to be taking on the role as CEO and to continue working with the global Stratasys team to advance our company's goals and values."

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TraceParts Online CAD Platform Celebrates 15th Anniversary, Announces Photo Competition

1 June 2016

TraceParts is celebrating the fifteenth anniversary of the launch of its online CAD platform. A subsidiary of the Trace Group created in 1989, TraceParts started its activity by distributing DVDs containing the 3D content of a few manufacturers. At that time, the DVDs were sent by post to design offices. Today, almost 600 industrial-part suppliers have chosen the TraceParts online platform to publish their catalogs and make them available to design engineers.

In 2001, TraceParts launched its first web platform for downloading CAD files, enabling the company to expand its publishing network around the whole world. The past fifteen years have been marked by constant growth and innovation; in 2016, the TracePartsOnline.net platform had 2.5 million designers registered on the site.

Françoise PFISTER, Managing Director of SIAM RINGSPANN, shares her experience of working with TraceParts since the launch of the first online platform, "SIAM – RINGSPANN has always appreciated the responsiveness and dynamism of the TraceParts team. Working in close collaboration with their technical department, we first published the 3D plans of our freewheels, then quickly added all our standard parts: our industrial brakes, cone clamping elements, torque limiters, and couplings. We share

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TraceParts objective in that we want to publish the plans of our parts with as many Design Offices as possible in order to foster contact and discussion with the end users of our technical solutions. Today, TraceParts' has created a genuine community of experts which extends all over the world. This contributes to the development of new projects and business for SIAM – RINGSPANN.”

To celebrate the fifteenth anniversary of its online CAD platform, RS Components is partnering with TraceParts in the launch of a photo competition which will take place from 1 June to 29 June 2016. The competition involves taking a photo which includes TraceParts' special anniversary logo.

To take part in the competition:

Participants must send in a photograph which includes the 15th anniversary logo of the TracePartsOnline.net platform. Participants can take a picture of themselves or other people and settings with the 15th anniversary logo of the TraceParts platform

Participants have until 22 June 2016 to send their photos by email to the following address:contest@traceparts.com.

The best photos will be published on the TraceParts Facebook page. The winning photo will be the one that obtains the most “Likes” by 29 June 2016. The lucky winner will receive a GoPro Hero4 camera!

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Wipro Open Sources Big Data Product, Big Data Ready Enterprise

2 June 2016

Wipro Limited today announced that it has open sourced its big data product, Big Data Ready Enterprise (BDRE), which makes big data technology adoption simpler and faster by optimizing big data workloads under an integrated unified framework.

The product addresses the complete lifecycle of managing data across enterprise data lakes, making it possible to ingest, organize, enrich, process, analyze, govern and extract data at a fast pace, significantly accelerating the big data implementation in a cost effective manner. BDRE is in production with multiple clients and has over 100+ opportunities across numerous verticals. BDRE is released under the Apache Public License v2.0 and hosted on GitHub.

According to the Gartner Report, Benefits and Compromises of OpenSource and Corporate Software Suites for Advanced Analytics, written by Alan D. Duncan et al, published in 8 June 2015, ‘Ever since the Apache Hadoop software framework first emerged in 2005, the open-source software community has been a driver of innovation in the field of advanced analytics and distributed data computing.’

Herb Cunitz, President, Hortonworks said, “Hortonworks believes that the greatest innovation happens through collaboration in the open source community. We are glad to hear that Wipro has open sourced its big data & analytics product BDRE and taken a stride in contributing to the open source community. This step will help us further strengthen our relationship and reinforces our belief in open source technology for the enterprise.”

“Wipro takes pride in being a significant contributor to the open source community, and the release of BDRE reinforces our commitment towards this ecosystem. BDRE will not only make big data technology adoption simpler and effective, it will also open opportunities across industry verticals that organizations can successfully leverage. Being at the forefront of innovation in big data, we are able to guide organizations that seek to benefit from the strategic, financial, organizational and technological benefits of adopting open source technologies,” said Bhanumurthy B. M., President & Chief Operating Officer, Wipro Limited.

Open source software consumption is on the rise. As per The Open Source Era study, commissioned by Wipro, 64% of respondents of Oxford Economics research believe that open source will drive Big Data efforts in the next three years. Releasing BDRE to the community will enable product growth in terms of new features and capabilities and also help numerous organizations with Big Data implementations. Open sourcing BDRE encourages collaborative development by accepting contributions from both individuals and organizations and reduces the time to develop the operational framework, leading to faster innovation.

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Events News

ANSYS Webinar: From Drones to Connected Cars: Safe and Secure Embedded Software Development for IoT Devices

27 May 2016

Developing an Internet of Things (IoT) enabled product is a complicated task, whether it be an autonomous vehicle, a vehicle user interface or a connected factory. IoT-enabled products contain hundreds, if not millions, of lines of embedded software code. And many of these products, and the systems and software that control them, are mission- or safety-critical. Therefore, developers must have confidence that the software code controlling these devices is 100 percent accurate and responds in the intended manner.

Attend this webinar to discover how ANSYS SCADE products and certified code generators provide a complete solution for the development of embedded systems, software and Human Machine Interfaces (HMIs) that are often a critical part of IoT-enabled products. We'll present practical use cases of industrial IoT systems developed with SCADE, including connected drones for the aerospace industry and autonomous vehicles for the automotive industry.

June 2, 2016

9:00 AM - 10:00 AM (EDT)

Register online

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Engineering.com Webinar Shares Best Practices for Cloud Deployment of Product Lifecycle Management

1 June 2016

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Aras® is joining with IDC Manufacturing Insights and Microsoft for a webinar entitled “How Will the Global Enterprise Use the Cloud in PLM?” Hosted by Engineering.com, the webinar takes place Wednesday, June 15, 2016 at 2:00PM ET. Free registration at <http://aras.com/plm/003255>

Today’s manufacturing enterprise has watched the cloud hype with skepticism, particularly when it comes to product lifecycle management (PLM). In the face of rising product complexity and cross-discipline product development, many global product development teams find an increasing range of situations in which using the cloud for PLM is an effective approach. These circumstances include supply chain collaboration, joint ventures, connected product design feedback and others that require PLM capabilities outside the scope of existing corporate PLM systems.

The Engineering.com webinar shares how these challenges impact the business of engineering and transform the way multinational companies combine existing PLM environments with the cloud for better results.

Webinar attendees will see first-hand:

Market dynamics affecting PLM requirements at global companies

Different conditions and circumstances in which the cloud works well with PLM

New approaches for using the cloud to address certain challenges

Webinar Presenters:

Jeffrey Hojlo, Program Director of Product Innovation - IDC Manufacturing Insights
Simon Floyd, Director of Innovation and PLM Solutions at Microsoft.

Webinar Details:

Hosted by Engineering.com

Wednesday, June 15, 2016

2:00PM ET

Free registration at: <http://aras.com/plm/003255>

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GibbsCAM 2016 and 3D Systems’ 3D Products and Services to be Featured at IMTS

1 June 2016

3D Systems, developer of GibbsCAM® software for programming CNC machine tools, announced today that it will be demonstrating the next generation of its Computer-Aided-Manufacturing software, GibbsCAM 2016, at the International Manufacturing Technology Show (IMTS), September 12-17, 2016, at McCormick Place, Chicago, in Booth # E-3310. IMTS is an ideal opportunity to check out the level of ease and sophistication that GibbsCAM® 2016 software brings to production machining. Building on its revolutionary UKM (Universal Kinematic Machine) technology, GibbsCAM 2016 delivers increased efficiency, accelerated programming speed, and enhanced visualization and accuracy for CNC machine programming.

New features and functions for GibbsCAM 2016 highlighted at IMTS include:

- Enhanced thread milling, including support for multi-point tools, tapered threads for both single- and multi-point tools, and improved simulation.

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- The latest VoluMill™ technology, providing new toolpath strategies to optimize high speed roughing of large pockets and slots, open face milling strategies that can decrease cutting time by up to 60%, and Technology Expert integration for ready access to optimal speeds and feeds.
- New Oriented Turning capabilities, giving users added control in how tools interact with parts. From using a single tool at multiple B orientations to reorienting tool groups for use on a different spindle to full support of Flash Tooling for multiple-orientation turning tools.
- Added toolpath strategies for 5-axis milling, enabling users to define toolpath direction using the natural flow of a surface with the new Flowline option, toolpaths with extended width and length, improved 5-axis drilling, multi-stepped pocket roughing and new gouge checking strategies.

Recognized for its ease of use, GibbsCAM was designed to help users eliminate scrap and reduce cycle times. Close work in tandem with shop owners and shop floor employees crystalized the evolving needs and necessities for helping our customers maximize efficiency, safety and profitability while giving them the freedom to create without limitations and deliver significantly better products than ever before.

GibbsCAM 2016 together with 3D Systems' full range of end to end software solutions for manufacturing covering SCAN-DESIGN-PRINT-MANUFACTURE-INSPECT can be seen in booth E-3310 and at the 3D Systems booth highlighting 3D Printing technologies at South Building - S-9119.

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Product News

3D Geometric Similarity Search Launched on the TraceParts CAD Platform

1 June 2016

TraceParts introduces an additional function into its CAD download platform for looking up parts and the associated information with a simple search using geometric criteria.

With the geometric similarity search feature, designer professionals can now use the 3D model of an existing part on the TraceParts platform to find all the variations and technical information of that model in just a few seconds and display the results of all the parts with a similar shape and size.

Basically, the 3DPartFinder™ shape search technology extracts the geometric signature that is unique to each part and compares it to millions of other parts on the TraceParts platform. The search results are presented in a 3D viewer, where the corresponding products are displayed in order of geometric similarity.

To provide CAD designers with even easier access to industrial parts, TraceParts naturally chose the ultra-powerful 3DPartFinder™ search engine.

To implement the new search engine, TraceParts joined forces with 3DSémantix, whose premise was based on a simple observation: “Engineers designing 3D models and using CAD systems face a problem when looking for similar parts in a large database with a keyword-based search engine.”

“Thanks to 3DPartFinder, we can tackle one of the major challenges with 3D searches and allow CAD designers registered on the TraceParts platform to find technically-similar parts that cannot be found

CIMdata PLM Industry Summary

with conventional text searches,” adds Bertrand Cressent, Global Product Manager of TracePartsOnline.net.

What that means for CAD designers is that they can now identify new parts without using keyword-based searches, thereby eliminating all the difficulties associated with the specific and precise terminology of a given product (description, language, and so on).

Registered users of the TraceParts platform can check out this new feature, which is currently available for certain 3D products.

Industrial parts vendors looking for more information about publishing their 3D product catalog can contact TraceParts by email at info@traceparts.com or visit the www.traceparts.com website.

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Altair HyperWorks 14.0 Releases Latest Free Student Edition

1 June 2016

Altair recently released the latest HyperWorks 14.0 Student Edition, making it the most comprehensive computer-aided engineering (CAE) suite available to aspiring structural and mechanical engineers.

Altair® HyperWorks® is the most comprehensive, open architecture CAE simulation platform in the industry, offering the best technologies to design and optimize high performance, weight efficient and innovative products. HyperWorks includes best-in-class modeling, linear and nonlinear analyses, structural and system-level optimization, fluid and multi-body dynamics simulation, electromagnetic compatibility (EMC) and antenna placement, multiphysics analysis, model-based development, and data management solutions.

The free HyperWorks 14.0 Student Edition brings all these features directly to students around the world and can be easily installed on any PC or laptop. The Student Edition is based on HyperWorks Desktop, an integrated user environment for modeling and visualization. It can be used to pre-and post-process finite element and multi-body dynamics simulations as well as to manage and visualize simulation results and test data.

The latest release of Altair's HyperWorks Student Edition includes several new products, feature enhancements and updated functionalities – just like the regular HyperWorks version.

Key highlights of the latest release are:

- FEKO, the best-in-class software for electromagnetic simulation related to antenna design and placement, electromagnetic compatibility, radar cross-section, and other applications is now part of the Student Edition. An integration with HyperStudy has been added for advanced optimization.
- OptiStruct's capabilities have been elevated to include more nonlinear analyses, new contact and optimization algorithms, and numerous improvements in solution speed. A breakthrough solution for the design and optimization of lattice structures has been developed to support additive manufacturing.

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- MotionSolve now provides improved 3D rigid-to-rigid contact and advanced co-simulation capabilities.
- Extended limitations for model calculation.

"The addition of FEKO, Altair's electromagnetic solution, will enable students to now also tackle tasks in electromagnetic field simulation directly within HyperWorks," said Dr. Matthias Goelke, Director, Academic Markets at Altair. "Its several solution methods with true hybridization will help students to receive efficient results for a wide range of problems. I'm also extremely happy about the extension of model limitation to 100,000 nodes for finite element solvers, since it will offer students more freedom to really work with the software. The students of today are the engineers of tomorrow and Altair always strives to support the education of future professionals with freely available software solutions and a broad range of support, including training, events, our moderated online forum, a learning library with videos, tutorials, a dedicated Learning & Certification Program and much more."

The license file of HyperWorks 14 Student Edition is valid for one year and supports multiple CAD formats as well as the import and export of HyperWorks Solver data.

The software is free of charge and available via the Altair Academic Website.

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AMC Bridge Releases Aras Change for Apple Watch

2 June 2016

AMC Bridge releases Aras® Change Management for Apple Watch®, a new mobile application for iOS devices that provides notification and voting services for Aras Innovator® items.

The application simplifies access to Aras Innovator functionality by enabling users to manage Aras Innovator items from iPhone® or Apple Watch.

In particular, users can search and explore Items assigned to them as well as comment and vote on a particular item.

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Artec 3D Debuts Artec Studio 11 Software Complete With Autopilot Post Processing Functionality

1 June 2016

Artec 3D, a developer and manufacturer of professional 3D hardware and software, today announced the release of Artec Studio 11, the latest version of its industry-acclaimed software. Designed for use with Artec's professional handheld 3D scanners as well as a range of sensors, Studio 11 offers simplified, rapid post-processing that never compromises on precision or accuracy. The new software release meets the needs of professionals at any experience level and boasts numerous automated features, including a state-of-the-art Autopilot mode, to create professional-grade, 3D models of any size.

With Artec's unprecedented Autopilot mode, users are guided through a few simple questions related to the characteristics of the object being scanned and the type of 3D model that is desired. Studio 11 then deletes any unwanted captured data, auto aligns the scans with one click, and instinctively selects the

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most effective 3D algorithms for the data at hand. The result is a high precision 3D model that is of the same quality as those created manually by an experienced user. Autopilot makes the process so easy a beginner can use it without the intense formal training that was once required. However, expert users can also leverage the intuitive feature, as it provides a quick pathway to achieving the highest quality model.

Those who prefer to have more control over the processing experience, can simply enter manual mode to have unfettered access to the platform's full range of superior data manipulation tools. Even in this mode, Artec Studio 11 speeds up workflow by automatically deleting the base an object was scanned on and auto-aligning scan data with total accuracy at the click of a button. Texture can also be added 10 times faster than before and can be mapped automatically where data is missing. Models can be further manipulated in a few quick clicks with user-friendly geometry editing tools.

With Artec's boosted real-time fusion scanning mode, users are able to move the scanner around an object and view the model as it is being built. This mode provides the perfect solution for digitizing simple objects or for instances where a quick preview is beneficial, such as scanning a body part for various medical applications. Furthermore, this power hungry mode, which used to require a hefty amount of RAM, has been optimized for a smooth scanning experience even on tablets.

"It's virtually impossible to tell the difference between a 3D model created using Artec Studio 11's Autopilot mode and one that was created manually by an expert user," said Artyom Yukhin, president and CEO of Artec 3D. "By making the process more intuitive, we are making the integration of 3D scanning easier among various professional industries ranging from entertainment and medicine to manufacturing, design and historical preservation. With Artec's advanced algorithms built into the system, users can create a professional-grade 3D model in a matter of minutes."

In order to provide increased flexibility to users, Artec Studio 11 allows for seamless integration with CAD programs 3D Systems Geomagic Design X and SOLIDWORKS. Direct export is now possible to both these industry standard engineering programs, the second thanks to the integration of SOLIDWORKS plugins: users have the choice of using either DezignWorks or 3D Systems' Geomagic for SOLIDWORKS to easily convert their 3D model for CAD. The new platform also adds the CAD required NVIDIA Quadro to its list of compatible video cards in order to support the seamless scan to CAD workflow. In addition, Studio 11 boasts a sleek user interface adapted for tablet use. The platform is even compatible with the widely available and popular Microsoft Surface Pro 4, which can be easily purchased locally or online through major electronics retailers.

Furthermore, for the first time ever, Mac users can now directly capture 3D data by using Artec's new ScanApp in combination with an Artec Eva scanner. The scans can then be exported to a Windows device for further processing in Studio 11. The beta version of Artec ScanApp is available for free download until the end of September 2016 online.

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CGTech to Demonstrate New VERICUT Version at IMTS

2 June 2016

At the 2016 International Machine Tool Show (IMTS) VERICUT version 8 will be featured in

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CGTech's booth E-3346. VERICUT CNC machine simulation, verification and optimization software simulates all types of CNC machining, including drilling and trimming of composite parts, water jet, riveting, robots, mill/turn and parallel kinematics. The software operates independently, but can also be integrated with leading CAM systems.

VERICUT Machine simulation detects collisions and near-misses between all machine tool components such as axis slides, heads, turrets, rotary tables, spindles, tool changers, fixtures, workpieces, cutting tools, and other user-defined objects. Users can also set up 'near-miss zones' around components to check for close calls and detect over-travel errors. Machine movements and material replacement can even be simulated while stepping or playing backwards.

New Ribbon Bar

Upon upgrading to VERICUT 8, the first thing an existing customer will notice is the new Ribbon Bar. The Ribbon Bar allows you to quickly select the VERICUT function you want to use. As you move from tab to tab, the Ribbon bar dynamically updates to show the options available for that tab. Options are grouped by the function they perform within VERICUT.

"VERICUT 8 is all about optimizing our customers' workflow to quickly access only the menu choices needed at the time," said VERICUT Product Specialist Tom Benedetti. "The Ribbon Bar helps users find the functionality they need quickly and with minimal mouse clicks."

The Ribbon Bar is highly customizable, but to ease the transition for existing users, a "VERICUT Classic" setting organizes all of the menus and options where users previously found them. Several other layout options are included and can be selected depending on the task at hand. Users can also create and save their own layouts as needed for different jobs.

Integration with cutting tool suppliers and tool management systems

As with all software programs, the accuracy of the data input will directly affect the output. So, an accurate model of the cutting tool and holder is required for the effective and accurate simulation of the machining process. Leading cutting tool manufacturers, such as Sandvik, Kennametal and Iscar, now make 3D solid model data available and VERICUT can read in this model data for use in the simulation process. Many of the 3D models are available via the Machining Cloud App, and version 8 has been enhanced to take advantage of more Machining Cloud metadata. This can significantly simplify the configuration of tools for use in VERICUT. VERICUT also interfaces with tool management systems such as TDM Systems, Zoller, and WinTool for access to databases storing cutting tool information. Pre-setting suppliers including Zoller and Speroni can also interface to the software, so tool offsets and exact dimensions can be applied to the simulation process.

Consolidated reporting features

The VERICUT logger now displays messages and reports from many sources. In addition errors, warnings, and other messages from the VERICUT session, it also displays information from AUTO-DIFF and X-Caliper. The messages can be grouped, sorted, and displayed in a variety of ways depending on user preference.

Force enhancements

The Force module, first available with the release of version 7.4, is a physics-based optimization method that determines the maximum reliable feed rate for a given cutting condition based on four factors: force on the cutter, spindle power, maximum chip thickness, and maximum allowable feed rate. In version 8 there are new features to account for entry/exit speeds, "clean-up" feedrates, and tooling information has been rearranged to be more intuitive.

Model manipulation simplified

The ability to translate models using features eliminates the need to create coordinate systems for positional information.

Graphical Tool Path Analysis

A new “Toolpath Trace” feature creates a wireframe of the motion path that can then be measured. No stock model needed to generate a path. Picking on a path in the wireframe automatically sets the simulation to the current line in the NC program.

Control Panel Emulator

Companies and schools can train future CNC machine tool operators using a graphical user interface that looks just like the real control. The virtual machine responds just as the real machine would.

Simulation of all types of machine tool brands

CGTech has worked with end users and machine tool manufacturers to create accurate and effective Virtual Machine Tool configurations. These range from simple 3-axis milling machines to multi-axis machining centers; simple 2-axis lathes to complex mill-turn centers with sub-spindles and robot loading; water jet and laser cutting, and machining/polishing robots.

VERICUT simulates every machine tool brand, including DMG MORI, MAZAK, Makino, Matsuura, Hermle, Chiron, Starrag, WFL, Nakamura-Tome and many more.

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Dassault Systèmes 3DVIA Launches Browser-Based Version of HomeByMe

1 June 2016

HomeByMe is an online interior design application that allows you to visualize your home ideas in 3D. Experiment with thousands of colors, materials and well known products to see your ideas come to life. Invite friends and family to view your progress and provide feedback as you make your decisions.

Homebyme leverages 3DVIA applications to provide an immersive and interactive user experience with new cloud-based services to transform home furnishing and interior decoration projects, visualize this transformation in a realistic 3D environment and connect consumers to home professionals.

The products and services presented on Homebyme are not sold by 3DVIA but referenced by partners who are solely responsible for the products, services and informations related to those products and services.

Experience for yourself: <https://home.by.me/en/>

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IronCAD Mechanical Product Update #1 Released

2 June 2016

IronCAD, LLC today announced in conjunction with the release of IronCAD Design Collaboration Suite 2016 Product Update 1 the immediate availability of an updated version of its powerful IronCAD Mechanical add-on. This upgrade further improves IronCAD Mechanical’s ability to significantly

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reduce design times by adding powerful tools to the areas of bill of materials, document management, as well as fasteners, structural steel and assembly management.

Some of the improvements to IronCAD Mechanical include:

- Pack and Go – If you have a complex assembly with many linked files sharing or transferring the assembly can be a time consuming task trying to ensure that all files are included in the transfer. The Pack and Go tool automatically takes an assembly and all linked files and packages it up for the user to a new location or into a zip file.
- Export and Import of custom data – In IPROActiveManager you can now easily import and export custom data from your BOM to an excel or CSV file.
- Direct selection of linked files – The IPROExternalLinkManager tool has been improved to show all linked files in an assembly in a simple list format. You can now select the linked file in the list and it will be selected in the scene. This approach makes identifying and selecting linked files a faster process than using the scene browser.
- Image capture for selected items– The IROCaptureImage tool has been enhanced to allow the image capture of just the element selected in the 3D scene. This is great when you have multiple parts or assemblies in a scene and just need an image capture of a select item, reducing time since you no longer have to suppress or hide other elements.
- More ANSI fasteners– Various improvements have been made to the IROFasteners tools allowing two washers closed to the head of a bolt as well as enhancement in ANSI support.

In addition to these productivity improvements, there have been numerous other enhancements and bug fixes.

The IronCAD Mechanical update is immediately available to all active support customers at <http://www.ironcad.com/icmechanical>.

"The combination of the enhancements to IronCAD Mechanical combined with our 2016 PU1 update furthers our commitment to our customers," commented Cary O'Connor, IronCAD's VP of Marketing, "These releases continue to make IronCAD a leader in design for fabrication and assembly."

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MSC Nastran 2016 Delivers Dramatically Improved Speed and a Range of New Analysis Solutions

1 June 2016

MSC Software Corporation today announced new releases of MSC Nastran and Patran. MSC Nastran 2016 delivers dramatic performance and speed improvements as well as new multidisciplinary analysis solutions. Patran 2016 improves support for nonlinear and fatigue analysis capabilities.

Release highlights of MSC Nastran:

Performance

- MSC Nastran 2016 uses enhanced Automated Component Mode Synthesis (ACMS) method with Shared Memory Parallel (SMP) computing delivering better performance and ability to effectively use more cores for higher user productivity. 50% parallel efficiency has been observed for 16 processors. SMP Parallelization can now be used to reduce the overall wall time

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stiffness matrix computations and stress recovery. 75% parallel efficiency has been achieved with 4 threads with the job running 3 times faster than with one processor.

- Availability of Intel MKL Pardiso solver has been extended to provide better scalability, thereby lowering the overall elapsed time of simulations.

3D Rotor Dynamics

- With the new 3D modeling capability, users can now model discrete blades and non-symmetric components of rotors and stators of rotating machinery, turbines and jet engines improving the accuracy of the rotor dynamic analyses. This type of modeling was not possible with 1D or 2.5D modeling solutions. With 3D modeling, engineers can now see what is happening locally at each blade or at the component level.

Dynamics and NVH

- Equivalent Radiated Power (ERP) can now be output for higher order shell and solid elements. It is also possible to output velocity normal to the surface and vibration intensity.
- Multiple load vectors produced by Actran can now be selectively incorporated in MSC Nastran's frequency response analysis.
- Efficiency of large poroelastic material simulations is improved with access to out-of-core solver of Actran.

Optimization

- New in this release is Global Optimization (GO) which combines automatic multi-start global methods and gradient based local optimization methods. This approach searches the complete design space for the best possible solutions. The new capability was implemented to help automotive and aerospace companies to lightweight safely while optimizing their designs.
- Multi-model optimization (MMO) provides the ability to process separate design models with different topology or analyses to perform combined optimization. This capability is enhanced to solve larger problems and without limit on the number of models.

MSC Nastran Embedded Fatigue

- To maintain consistency with other fatigue solvers, nodal averaged stresses and strains are used for faster computation speed and a more realistic fatigue damage factors.
- Skinning is implemented to create a 2D stress state on the surface of the model leading to fewer calculation points and enabling multi-axial assessments and correction on 3D solid elements.

Advanced Nonlinear

- Beam contact is implemented with segment-to-segment contact algorithm and support for general beam cross section, tube-in-tube contact, including beam offsets, reducing computational cost and providing better accuracy.
- Interference fit analysis common to engineering applications is enhanced to handle large interferences/overlaps.

Explicit Analysis

- Three new models have been introduced to simulate complex material behavior, namely, a time

dependent viscoelastic creep model, Thermo-elasto-viscous plastic creep model, and Riedel-Hiermaier-Thoma model for concrete materials.

- Adaptive solid elements that transform to SPH particles which can help simulate the effects of debris after element failure

Results

- In addition to the existing result formats, MSC Nastran 2016 introduces a new results database based upon the HDF5 standard, which is an open format that will allow easier access via public viewers, Python, Java or C++.
- A new utility is available to provide output file data in easier to read format.

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Onshape's FeatureScript Lets 3D CAD Users Design Faster With Custom Parametric Features

31 May 2016

Recognizing that the design challenges for each industry and every company are different, Onshape is introducing FeatureScript, a new open programming language that lets CAD users create their own built-in parametric features or modify existing ones.

Ever wish you could change the way your CAD system's features work? FeatureScript lets you do just that. It is the same language used to develop all of Onshape's current features (Extrude, Fillet, Shell, Loft, etc.) and has already been used millions of times by Onshape users without even realizing it.

By making FeatureScript public – available to all Free, Professional and Enterprise Customers – full-cloud Onshape is now offering the first truly customizable parametric CAD feature set.

"This is the first time that a professional CAD system has made the implementation of its parametric features open and extensible," says **Ilya Baran**, Onshape's Director of FeatureScript. "In the past, the only way to change your feature toolbar would be to submit an enhancement request to your CAD vendor and wait forever. And most of those requests are never fulfilled. FeatureScript swings the pendulum back and puts you in control."

"In traditional desktop-installed CAD systems, it is possible to write add-on or macro features, but they are never as good as the built-in ones," he adds. "FeatureScript offers the first opportunity to create features that are first-class citizens – as much a part of the system as the ones the development team wrote themselves."

Under the open source [MIT License](#), Onshape is also sharing the FeatureScript source code for all of its own features, allowing customers to copy, modify or adapt them as they see fit. New Onshape features can now be created in Onshape's new "Feature Studio," a user-friendly development environment with a powerful editor, in-line help and documentation.

Possible uses for FeatureScript include:

- Creating new high-level parametric features that perform complex or customized geometric modeling tasks. Features like these let users design products faster than they can with traditional off-the-shelf features.
- Customizing existing features to suit user preferences for working fast and efficiently, such as a

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surface split feature that splits and preserves exactly the pieces that a particular user prefers.

- Combining existing features into one, such as a drafted filleted pocket.
- Filling in some current gaps in CAD functionality, such as a customized extrude option, or a particular type of 3D spline curve through points or driven by an equation.
- Creating surfaces using data from uploaded CSV or other data files.
- Building specialized patterns, such as sinusoidal or other unusual pattern geometries with unique per-instance behavior.
- Building a specialized toolkit for a company (custom gears or enclosures or connectors that are used over and over again).

"For 30 years, feature-based modeling has relied on a limited set of off-the-shelf features. With FeatureScript, we are ushering in a new era of custom parametrics," says Onshape founder **Jon Hirschtick**. "Our early adopters have proven that with the ability to use custom features that they write or have others write for them, they're able to significantly speed up their design process."

"Customers who develop new features in FeatureScript are free to do with them as they please," he adds. "Some may wish to sell them or share them with the community. Others might choose to keep their FeatureScript features proprietary as a competitive advantage."

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Zuken Introduces Perfect Springback Routing in CADSTAR 17

2 June 2016

Zuken announces industry-leading routing enhancements in the latest version of its CADSTAR desktop PCB design software. Other productivity enhancements include improved routing patterns for differential pairs, and Etch Factor support.

Jeroen Leinders, CADSTAR Worldwide Sales Manager, said: "CADSTAR 17 challenges the view that PCB Desktop software has to be complicated. It builds upon the ease-of-use functionality with new powerful and accessible features. This philosophy helps maintain CADSTAR's position as the industry's most-used desktop PCB software."

For a limited time you can select any CADSTAR product and get a product of equal or lesser value for free: www.zuken.com/cadstar-offer

Moving tracks while in Activ-45 mode now incorporates Perfect Springback technology, offering smooth and fast operation, restoring the previous pattern and position exactly (from Version 17.0.1.0). This makes routing faster and more responsive, and means there is no need to review return positions when trying out and undoing routing options. This rubber band-like operation is seen when dragging tracks in Activ-45 mode for Activ-45 pushing. A similar operation can be found in the manual routing and lengthening tools. Perfect Springback significantly reduces the number of clicks needed to place and route, compared to traditional routing technology.

Improved routing patterns for differential pairs

Updates have been made to the Trunk End Router so that improved routing patterns are generated for differential pairs.

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Coupling is maintained and skew is improved. Now previously manual tasks are carried out automatically – and are significantly closer to the route an expert user would choose themselves. This increases productivity, especially when working with very dense designs, and reduces mouse clicks when working with the lengthening tool. For high speed designs better signal integrity is achieved, as well as more exact impedance calculations, due to taking the etch factor into account.

Etch Factor Support

Support for Etch Factor definition is available in the Configuration Editor and Constraint Manager. This is compatible with former trapezoidal conductor support, and etching for half-planes is available. By achieving impedance results that more closely match reality, including more accurate what-if studies, high-speed designs with greater signal integrity can be manufactured.

Ease-of-use

A range of new ease-of-use features are included in CADSTAR 17. These include:

- When interacting with a selection it is now possible to specify an origin used as a reference for operations such as movement and rotation.
- Dimensions may be added directly into PCB component footprints. There are also improved version checks against the parts database when a design is loaded.

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