CIMdata

PLM Industry Summary

Sara Vos, Editor

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CIMdata News

CIMdata Brings the PLM Industry's Premier Education and Training Program to the Midwest

27 February 2018

CIMdata, Inc., the leading global PLM strategic consulting and research firm, will bring its highly acclaimed Product Lifecycle Management (PLM) Certificate Program to the Kensington Hotel in Ann Arbor, Michigan from May 21-25. The program is recognized as the PLM industry's most comprehensive solution-agnostic education offering, with over 400 PLM professionals certified to date.

The program helps prepare PLM professionals to successfully address the challenges commonly faced in PLM strategy development and implementation. The assessment-based program includes a personalized classroom experience, individual and team-based exercises, and individual evaluations of achievement. The program is facilitated by a team of CIMdata experts. Upon successful completion of the program, participants receive a CIMdata PLM Certificate and are invited to join CIMdata's global PLM Leadership community.

The program, which is available to industrial companies that are considering or are already implementing PLM, and to PLM software and service providers, is built on CIMdata's 35 years of experience guiding industrial companies in successfully defining and implementing best-in-class PLM strategies and tactics. Additional programs will be held in Amsterdam, The Netherlands from June 11-15; Boston, Massachusetts from October 1-5; and Santa Clara, California from December 3-7.

CIMdata's one-day Executive Short Course and two-day PLM Fundamentals for Solution Providers Short Course will also be available at this time.

For more information on CIMdata's PLM Certificate Program visit our website at https://www.cimdata.com/en/education/plm-certificate-program.

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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Digital Enterprises Demand Analytics-Driven Insights (CIMdata Commentary)

27 February 2018

Key takeaways:

- *Analytics-driven insights from the data produced by connected products and processes must be fully leveraged to build a successful digital enterprise.*
- *TCS has helped businesses in many industries develop and execute digital enterprise transformation strategies by leveraging analytics-driven insights.*
- *TCS invests heavily in analytics-related R&D to ensure that the latest knowledge and tools are available for accelerating enterprise digital transformation.*
- *TCS has wide expertise in applying analytics at the intersection of enterprise resources and product engineering for identifying hitherto untapped value.*

Journey to Analytics-Driven Insights and Decision-Making

Internet of Things (IoT) deployments are generating and capturing massive volumes of structured and unstructured data. The convergence of IoT, cloud, and big data is exposing new sources of information in businesses that should be leveraged through proactive and consistent use of analytics. Unfortunately, data alone has limited value. Significant transformation is required to extract insights that lead to enhanced innovation and improved operational efficiency. Given increasing data transmittal speeds that don't have geographical restrictions, the opportunity to leverage near real-time data is growing rapidly. When the near real-time data is brought together and analyzed with historical systems performance, behavioral metrics, demographics, and other data, powerful competitive advantage can be gained.

McKinsey Global Institute's 2011 report[1] on big data identifies five broad mechanisms that companies can leverage to transform themselves to create new value and outperform their piers: 1) creating transparency; 2) enabling experimentation to discover needs, expose variability, and improve performance; 3) segmenting populations to customize actions; 4) replacing/supporting human decision making with automated algorithms; and 5) innovating new business models, products, and services. Unfortunately, applying these mechanisms is not straightforward. That is because data insights often reside at the intersection of different elements of product lifecycle management and enterprise resource management, thereby requiring creative and robust analytics that cut across information technology domains to uncover them. Analytical tools must help businesses explore and visualize any type of data stored anywhere, to discover hidden opportunities in their IoT, cloud, and other digital investments.

Forward-thinking organizations realize that analytics must be operationalized to integrate actionable

[1] "Big data: The next frontier for innovation, competition, and production," McKinsey Global Institute. May 2011.

insights into systems and business processes for making decisions. Most businesses have begun with static dashboards, although some are experimenting with automated analytics built into applications, which are launched on mobile devices.

The journey of businesses through different levels of analytics maturity, i.e., descriptive, diagnostic, discovery, predictive, and prescriptive, needs the development of a certain analytics culture with consistent C-level support. A successful transformational journey depends on a well thought out strategy and implementation roadmap, which should be proven through positive return-on-investment and adoption at every stage.

Some recommendations for successfully operationalizing analytics[2] are described below:

- Tie short- and the long-term business objectives of projects meant to operationalize analytics with revenue, to ensure consistent executive support.
- Address data governance and stewardship issues upfront, to make sure that analytics-based decision-making is reliable.
- Facilitate transparency and communication of accomplishments, across the analytics lifecycle, to enable and drive persistent innovation.
- Integrate analytics models with organizational workflows, while making them interactive and customizing their front ends, to encourage adoption.
- Focus business execution around analytics by deploying analytics models within systems and applications to maximize the chances of leveraging insights.
- Continuously monitor and optimize the performance of systems that transmit data and/or convey control to increase consistency and confidence in decision-making.
- Maintain sufficient in-house data science skill to develop and guide analytics-driven insights transformation, even if outside firms are engaged to develop and deploy analytics solutions.

By leveraging analytics-driven insights and decision-making, at the intersection of different elements of product lifecycle and resource management, businesses can become more innovative by uncovering new ways of improving both their top-line revenue and bottom-line financial performance. However, many technical challenges need to be overcome before the value of analytics-driven insights can be proven and analytics investments within the enterprise can be increased. The challenges arise from the complexity of dealing with several types of analytics applied to many different types of data coming from many heterogeneous information systems and edge computing applications.

Depending upon the nature of the business and the areas of the business from where insights are sought, a wide variety of analytics may be applied, e.g., reporting, visualization, performance management, forecasting, optimization, rules engines, what-if simulations, geospatial analytics, social media analytics, text analytics. These wide-ranging analytics may operate on a wide variety of data types, e.g., structured, semi-structured, time-series, geospatial, event, app logs, social media, sensor and device output, streaming, real-time continuous, unstructured.

In CIMdata's opinion, analytics at the intersection of different engineering and business domains involves bridging business siloes and systems, and this is fraught with challenges of heterogeneity, discontinuity, and "not invented here" issues that are all particularly difficult to surmount in mature

[2] "Operationalizing and Embedding Analytics for Action." Fern Harper. TWDI Research. SaS. Q1 2016.

businesses. Although software solution providers offer a wealth of connectors, adapters, application programming interfaces, and software development kits to access data from multiple sources, as well as embed reports and visualizations into application user interfaces, while covering databases, cloud applications, and big data infrastructure, there are many moving parts to the complex analytics insights projects, making them susceptible to failure.

Considerable upfront assessment and thought is needed to develop a long-term strategy and a realistic roadmap for a business to transform itself into an enterprise that leverages its data efficiently for generating actionable insights, applicable in near real-time in a prescriptive and repeatable manner. In CIMdata's experience, it calls for expertise in developing and deploying a wide range of analytics tools, as well as the expertise in handling large volumes of high velocity data of a wide variety, coming from many different sources. In other words, a meaningful strategy and a realistic roadmap for analytics-driven insights requires deep expertise in analytics tools, data types, and large-scale systems integration. CIMdata believes that a piecemeal attempt at analytics-driven insights is likely to result in islands of analytics within a business, without the ability to leverage cross-discipline dependencies that could potentially lead to disruptive innovations.

TCS' Expertise in Transforming Businesses into Analytics-Driven Enterprises

CIMdata has observed that TCS's mature data analytics consulting practice can undertake projects extending from proof-of-concept demonstrators to strategic enterprise level transformations in different industries. TCS has developed a wide range of analytics tools over the past decade and applied them to generate insights at their clients' businesses in the automotive, aerospace, industrial machinery, and process industries. They have more than 1,200 consultants engaged globally with customers in the analytics space and they continue to reorient their competencies towards analytics, artificial intelligence, machine learning, data lakes, IoT, and master data management.

CIMdata is aware of TCS's heavy investments in analytics-related R&D to ensure that the latest understanding and tools are available for its clients' enterprise digital transformation. TCS has demonstrated both scale and complexity of engagements in analytics-driven insights, extending from data discovery to value realization, while covering information architecture, knowledge and collaboration, and value development. TCS also continuously develops analytics tools in its labs dedicated to research, deliverability, and usage by co-creating with its customers, and it possesses more than 250 patents related to digital technologies in this space.

Additionally, TCS has developed a variety of cross industry analytics tools with capabilities such as visual analytics, buzz measurement, artificial intelligence enabled image analytics, data quality manager, data modeler, big data enterprise architecture manager, neural automation, customer insights, information fusion, warm archival for big data, listening platform, and a network of software bots. TCS has also developed tools specific to the manufacturing industry such as industry specific key performance indicator tree, enterprise data models covering all value chain functions, role-based analytics, business cases for transformational benefits, early warning systems, customer lifetime profitability, predictive maintenance, executive alert system, sensor data analytics, etc. TCS also offers its Connected Universe Platform, an enterprise-grade, modular, and cloud agnostic Platform-as-a-Service solution that becomes the backbone of IoT-driven businesses, products, and services, in both consumer and industrial segments. In CIMdata's opinion, TCS offers a broad set of solutions to businesses of different types and sizes for cost-effectively extracting analytics-driven insights that can be used to help develop new products and services, while remaining cost-competitive.

CIMdata believes that TCS has made significant contribution to product quality and reliability by

enabling analytics-driven insights in product development processes. TCS has leveraged its suite of data analytics tools in product development to help clients improve their capabilities through customer feedback analytics, social product development, self-learning systems, product performance optimization, feature mix optimization, product cost management, remote upgrades, connected prognostics, compliance analytics, recall analytics, and predictive maintenance. Figure 1 shows the current extent of TCS's impact in leveraging analytics-driven insights along with the focus of this expertise in product development.

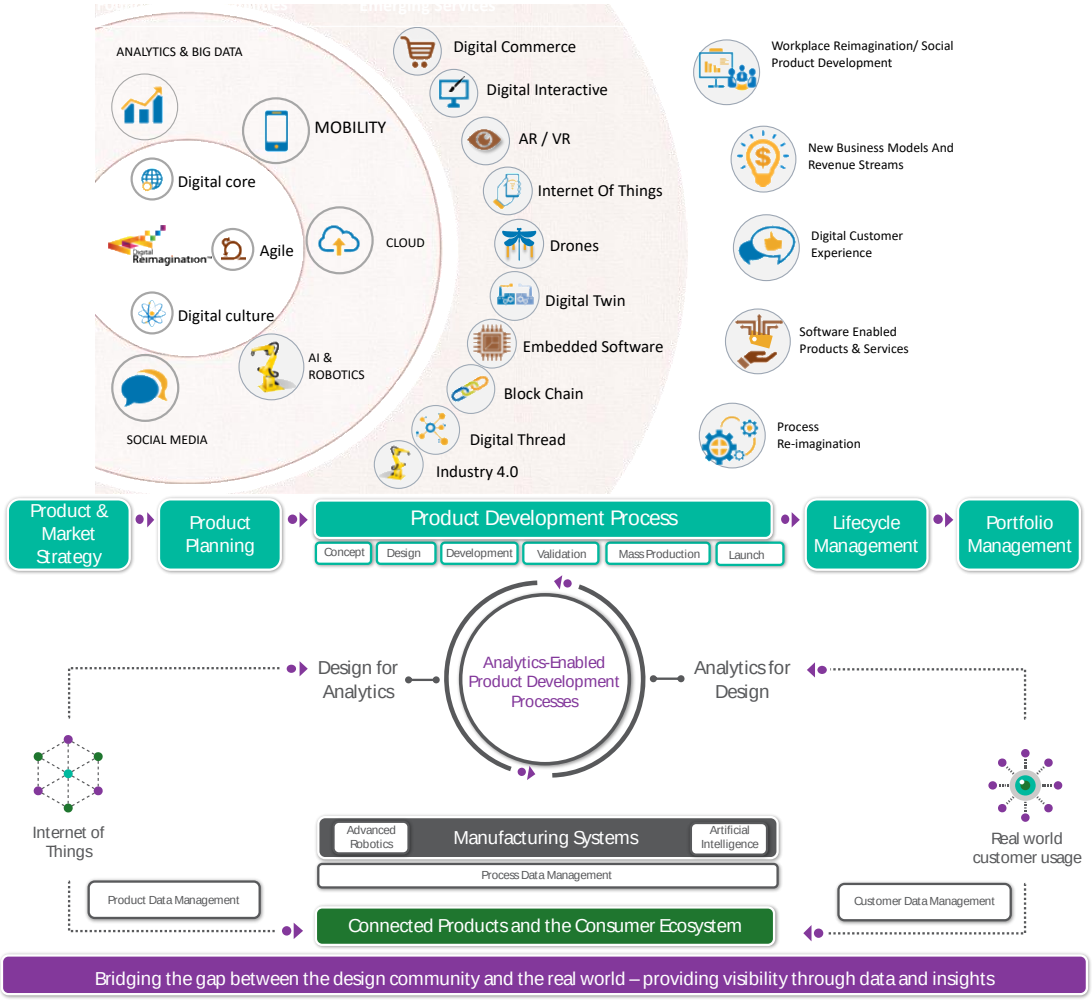

Figure 1—TCS Analytics Expertise for Cross-Discipline Innovation and Enterprise Digital Transformation
(Courtesy of TCS)

TCS' expertise in analytics-driven consulting is wide and deep, cutting across different areas of engineering and business processes. The cases briefly described below highlight a few examples of uncovering cross-discipline influences and analytics transformational journeys that TCS has delivered for its clients.

- Built an organizational data core and insights platform for an aerospace OEM to enable a transformational journey to an insights-driven business.
- Defined next generation executive dashboard and data visualization strategy for an automotive OEM based on a recommended data discovery tool.

- Implemented a connected products program for an engine manufacturer to enable telematics data-based service advice to customers in near real-time.
- Developed an early field quality issues detection capability for an automotive OEM based on ontology applied to voice-of-customer data and sensor data for shrinking detection times.
- Deployed supplier capacity monitoring tool at an automotive OEM by integrating data from product development, supply chain, and sales, for early detection of capacity gaps.
- Recommended optimum mix of product derivatives to an automotive OEM for maximizing the profitability of stock orders.

Summary

Over the years, CIMdata has kept track of the progress of big data and analytics related to product development and enterprise resource management, which has seen considerable acceleration. In general, CIMdata has found that businesses in different industries have introduced silos of analytics that have been initiated by specific domain leads based on their interests and needs. Though such siloed analytics introductions are a good start to demonstrate proofs-of-concepts, they could become roadblocks to a systematic and required end-to-end transformation of businesses into analytics-driven digital enterprises, due to mismatches with the analytics needs of other areas of the enterprise.

CIMdata believes that two conditions necessary for successful transformation of a business into an innovative and efficient digital insights-driven enterprise are 1) a deep understanding of analytics tools development and 2) the ability to combine a variety of data from diverse systems while ensuring data quality. In addition, CIMdata believes that it is necessary to be able to strategically plan and execute the digital transformation based on realistic roadmaps from the "as-is" to the "to-be" state, while demonstrating incremental levels of adoption and value delivery.

CIMdata has a good understanding of TCS' suite of analytics tools and their systematic approach to developing new and better analytics tools as IoT, cloud, and big data technologies evolve. CIMdata also has a good understanding of TCS' business transformation expertise spread across businesses in different industries. Given these understandings, CIMdata is convinced that TCS' expertise in business transformation together with its depth in developing analytics tools based on it partnerships with many solution providers, as well as academic expertise in data science, will be able to help companies in different industries to successfully take on the transformational journey to become digital enterprises that leverage analytics-driven insights on a consistent and innovative basis.

About CIMdata

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HCL's DFx Insights '18 (CIMdata Commentary)

1 March 2018

Key takeaways:

- *CIMdata was impressed by the level of satisfaction displayed by HCL customers including presenters from major US industrial users.*
- *DFMPro's new costing module extends the suite of Design For X (DFx) applications to help companies determine what a product should cost.*
- *Many customers noted that every very experienced organization made the same DFx mistakes over and over, likely due to the ad-hoc way DFx knowledge is shared and used within organizations.*

CIMdata attended the DFMPro annual user meeting, DFX Insights '18, in downtown Detroit at the Renaissance Center. The one-day event was focused on the DFMPro application, one of several products from HCL. The event is billed as one "that connects industry leading product design experts, technologists, and thought leaders." Attendees from automotive, A&D, construction equipment, high-tech electronics, and leading companies from other industries gathered to discuss their experiences and learn.

DFMPro is a design validation solution that helps ensure that designs can be produced. It supports injection molding, sheet metal, machining, casting, welding, tubing, additive manufacturing, and assembly processes. It has hundreds of rules encoded in it and is extensible. CIMdata has previously commented[3] on the product which is different from CAD file checkers as it validates models to design for manufacturability guidelines rather than standards for CAD data creation.

Mr. Swadhin Bhide, Director of Product Management for HCL Technologies Ltd. gave the opening keynote. He talked about DFXPro and the other products his group develops including Glovius, a multi-CAD 3D visualization solution; CAMWorks; and GeometricStackup, a 1D tolerance analysis tool. The core of Mr. Bhide's presentation covered the results of a survey HCL did on DFx practices in industry. Thirty-four percent of the respondents said DFx information was obtained "primarily through intermittent trainings only" and an astounding 57% said "primarily through word-of-mouth and experience passed on through generations." Furthermore, only 17% of the respondents said they had DFx tools available at an organizational level, and 58% said they had no DFx tools. CIMdata finds these results believable, but considering all the effort companies have made about process improvement and the efforts put into Lean and Six Sigma programs we are surprised DFx penetration is not higher. The good news is there should be a lot of low hanging improvement opportunities.

Speakers from a US automaker, a medical imaging device manufacturer, and a networking device producer all described the value they received from using DFMPro within their companies. All noted the usefulness in that the software enabled designers and engineers to identify issues early in the design phase rather than later in the process when changes are more expensive. A big surprise noted by CIMdata was that several attendees mentioned their internal experts regularly made the same mistakes

[3] https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/3345-design-with-confidence-commentary

over and over, but fortunately they were identified by DFMPro early in the process.

Industry analysts delivering presentations included Mr. Joe Barkai, Mr. Vikram Bhargava, and Mr. Tom Gill. Mr. Barkai, a consultant, speaker, author, and blogger[4] presented how companies need to stop repeating the same mistakes over and over and how to avoid that issue by capturing and reusing knowledge. Mr. Bhargava Global Engineering Consultant & Trainer, and author of a new book on robust plastics product design[5] talked about his experience developing plastic products and how design for manufacturability was a game changer at his employers when he worked in industry and with his consulting clients. Mr. Gill discussed Model Based Enterprise (MBE) and how design for manufacturability tools such as DFMPro are a critical solution within MBE.

Mr. Prashant Chandanapurkar, Senior Program Manager for HCL Technologies Ltd., delivered a presentation on HCL's new cost feedback module for DFMPro. His well understood premise, shown in Figure 1, is that it can be orders of magnitude cheaper to catch errors in the design phase.

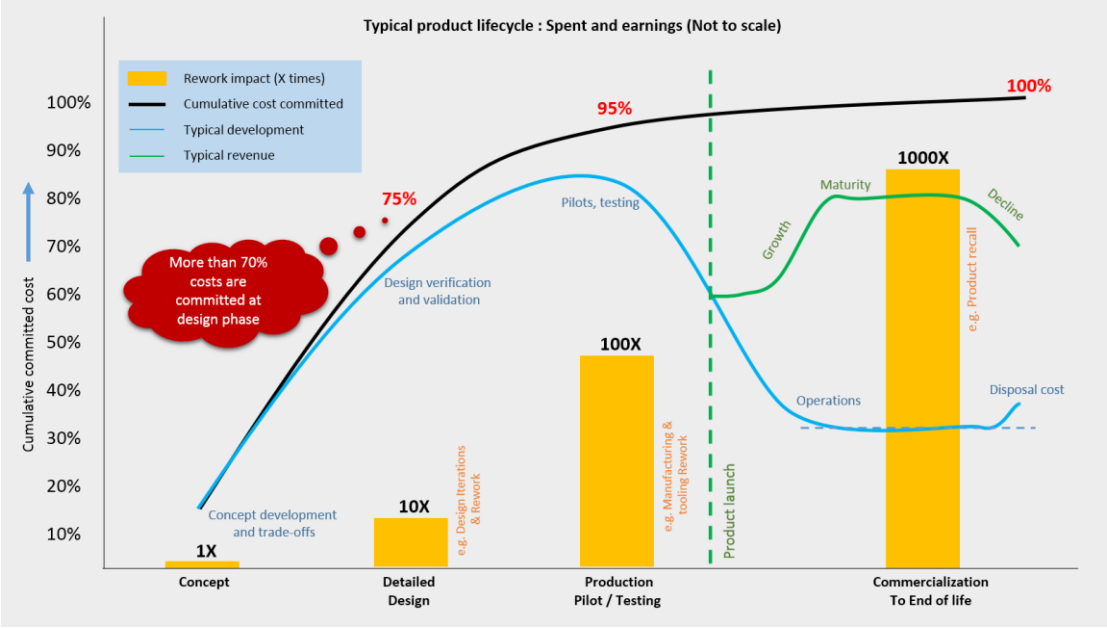

Figure 1—Identifying Cost Drivers Early is Critical
(Courtesy of HCL)

Mr. Rahul Rajadhyaksha, Product Management at HCL Technologies Ltd., gave a brief history of how DFMPro has evolved since 2008 and where it is headed. At a high level, today, knowledge is manually captured as rules that get executed, however, over the next 5 to 10 years it will evolve into a much more automated process due to capturing data from manufacturing process digital twins and through advances in machine learning technology. This aligns well with CIMdata's view of the future. Beyond the product vision Mr. Rajadhyaksha also gave pointers about how to implement DFx now and showed how it can be incorporated into enterprise process models and MBE to support the product lifecycle in a holistic fashion.

Conclusion

[4] http://joebarkai.com
[5] https://www.amazon.com/Robust-Plastic-Product-Design-Holistic/dp/1569905800/ref=sr_1_1?ie=UTF8&qid=1519135405&sr=8-1&keywords=Vikram+Bhargava&dpID=41eJ24BKE6L&preST=_SY291_BO1,204,203,200_QL40_&dpSrc=srch

CIMdata was impressed with the passion the attendees showed and how they are improving the competitiveness of their companies with design for manufacturability and in particular DFMPro. DFMPro has enabled them to validate the manufacturability of their products before production improving their business performance. Also impressive was the lack of complaints, it is rare to attend a software focused conference and not hear at least some grumbling. The DFMPro customers were universally positive. The new cost analysis capability and planned enhancements will make DFMPro even more capable. CIMdata is already looking forward to next year's event to hear about more successes.

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Acquisitions

congatec AG acquires Real-Time Systems GmbH

27 February 2018

Congatec has acquired Real-Time Systems GmbH (RTS), headquartered in Ravensburg, Germany. Founded in 2006, RTS is a leading provider of hypervisor software for real-time applications in the embedded market.

"The congatec strategy is to simplify the use of embedded computing technologies," explains Jason Carlson, CEO of congatec. "As the connected IIoT and Industry 4.0 world is getting more and more complex, one of the most important strategic levers to meet this objective is to invest in software." Getting the chance to acquire a market-proven and established hypervisor technology that perfectly matches the IIoT and Industry 4.0 needs is a significant milestone for congatec.

RTS will become a wholly owned subsidiary of congatec. The company will continue to operate independently, doing business as it always has, providing it's software to run on any x86 hardware, but now with worldwide sales and technical support teams ready to support the product.

"If customers need a hypervisor with the best possible real-time performance, easy installation and configuration for any x86 multicore platform, supporting all popular real-time as well as general purpose operating systems, then the RTS Hypervisor from Real-Time Systems is the preferred choice," explains Gerd Lammers, CEO at Real-Time Systems GmbH. "Our RTS Hypervisor therefore fits perfectly into congatec's strategy of simplifying the use of embedded technology under very demanding

circumstances. We are confident that our customers will benefit from our joined forces as it gives us the chance to grow faster, extend our offerings to new markets and improve our services on a global base."

Real-Time Systems' customers are OEMs from markets such as robotics, automation, mechanical engineering, medical technology or test and measurement systems. New markets further arise from the increasing real-time requirements of IIoT and Industry 4.0 applications as well as real-time broadcasting and streaming. Other customers are embedded computer technology manufacturers who qualify the platforms they develop as ODMs for OEMs for the RTS Hypervisor.

"We are investing in the sustainable growth of Real-Time Systems. For instance, we want to extend the functionalities of the RTS Hypervisor in order to open up new markets in the field of transportation. All RTS customers will benefit from these investments; this is because the RTS Hypervisor is independent of any RTOS and GPOS, which gives us the chance to set new standards. The explicit goal is therefore to continue to attract embedded computer manufacturers as customers and to maintain existing customers in this segment," explains Gerhard Edi, CTO at congatec. "We will take all necessary organizational measures to achieve these goals. Discussions with these customers have already been initiated in connection with this acquisition announcement."

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Gamma Technologies Acquires AutoLion® Battery Modeling Software For Electric Vehicle Modeling

26 February 2018

Gamma Technologies, LLC announced today that it has acquired the AutoLion® battery modeling software business from EC Power.

AutoLion is the industry's most advanced Li-ion battery simulation software used by battery suppliers and OEMs for both 1D and 3D battery analysis and design. It is a predictive, physics-based, simulation tool that models internal battery electrochemical processes, thus allowing fast evaluation of a wide range of battery chemistries (including mixed chemistries) and cell designs under even extreme conditions. It also models chemistry-specific degradation mechanisms and allows prediction of battery aging over a wide range of operating conditions, as well as battery safety simulation (resistance to abuse). In addition to the advanced simulation capabilities, AutoLion includes a comprehensive electrochemical database for many different materials and chemistries used in Li-ion batteries, reducing the burden for laboratory testing for electrochemical properties.

As a result, GT users can now access this battery modeling tool under the name AutoLion-GT, integrated into GT-SUITE and also directly with our new GT-DRIVE+ solution, for direct application to electrified vehicle systems and battery thermal modeling. This allows the use of these fast-running battery models as an integral part of vehicle system simulations to model battery performance and predict battery life.

Announcing the acquisition, Dr. Thomas Morel, CEO and President of Gamma Technologies said, "This development exemplifies our commitment to our customers and users of GT-SUITE/GT-DRIVE+, by enhancing its already strong capabilities for modeling electrification concepts such as hybrids, battery electrics and fuel-cell vehicles. This combination strengthens the position of Gamma Technologies as the leading supplier of simulation tools for xEV development."

Commenting on the transaction, Prof. Chao-Yang Wang, Founder and Chairman of EC Power explained, "As a result of the research effort that we have invested in the creation of AutoLion, it is today the leading tool among battery researchers and suppliers globally. We feel that now is the right time to take AutoLion to the next level with GT, who are well positioned as a market-leader to introduce it to all OEMs as a part of a whole vehicle simulation."

A long-term agreement between ECP, Prof. Wang and GT assures an on-going cooperation to satisfy emerging customer needs through continued development of AutoLion and its adaptation to new technologies.

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Nutanix Announces Intent to Acquire Minjar

1 March 2018

Nutanix, Inc. today announced that it has entered into a definitive agreement to acquire Minjar, Inc. ("Minjar"), the maker of Botmetric, a service that provides customers with unified cost control and enhanced visibility into their workloads running in public clouds. Botmetric, along with Minjar's other cloud solutions SmartAssist Assurance and SmartAssist Managed Cloud, help enterprises embrace the cloud effectively and optimize their multi-cloud environments for performance and cost. The closing of the acquisition is subject to the satisfaction of customary closing conditions.

Through the Minjar acquisition, the Nutanix Enterprise Cloud OS will offer customers new capabilities to better manage their multi-cloud deployments.

Once the acquisition closes, Nutanix also plans to use Minjar's technology to bolster its Nutanix Calm automation and lifecycle management product, as well as Xi Cloud Services, a native extension to the Nutanix Enterprise Cloud OS software. Nutanix Calm will take advantage of Botmetric's cloud management platform, helping customers reduce costs, save time and bring reliability to multi-cloud management. Integrated with Nutanix Calm, Botmetric can increase visibility into the cost of cloud deployments across multiple platforms, allowing enterprises to optimize which workloads run in which cloud. It will also offer a real-time scan for cloud compliance designed to find risks and security violations so companies can identify and resolve potential cloud security threats before they turn into business challenges. Minjar's public cloud expertise will also help accelerate and strengthen Nutanix Xi Cloud Services by streamlining and enhancing the customer experience.

"As companies increasingly rely on the public cloud as part of their critical infrastructure, it's imperative that they have full visibility into the cost, reliability and security of that infrastructure so that they can effectively manage and automate which workloads run where to maximize performance and ROI," said Vijay Rayapati, Co-Founder and CEO of Minjar. "We're so pleased to be joining the Nutanix family to add our technology to the leading edge Nutanix software stack so customers have a simple and elegant experience for managing their multi-cloud environments."

"Minjar is a pioneer that provides tangible benefits to enterprise customers on their multi-cloud journey," said Sunil Potti, Chief Product and Development Officer, Nutanix. "As one of the earliest partners to the leading public clouds, the experience and insights garnered from multiple cloud-native deployments have enabled Minjar to build a robust offering in Botmetric. Minjar's customer focus and philosophy of one-click simplicity is extremely well aligned with our own, and we are honored to soon

welcome them to the Nutanix team. We are looking forward to offering our customers the full breadth of Minjar's multi-cloud capabilities while deeply integrating them into our Enterprise Cloud OS."

Minjar and Botmetric customers can expect further communication from Nutanix following the closing of the acquisition.

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SD3D Completes Acquisition of 3D Materials Research Firm 3D Matter

21 February 2018

SD3D has completed the acquisition of the New York based software company, 3D Matter, for an undisclosed amount. 3D Matter launched the platform in 2015 in order to make it easier to visualize the performance of 3D printed materials based on empirical data derived from mechanical testing over 3000+ authentic 3D printed parts.

Initially a client of 3D Matter, SD3D began utilizing the material optimization and forecast tools to enhance the quality and confidence in their 3D design and print production services. SD3D recognized the value of the Optimatter solution to their strategic growth plans, which led to the acquisition.

The acquisition includes both the 3D Matter brand and the Optimatter material optimization software. Optimatter is a web-based platform in which designers, engineers and researchers can optimize their 3D printed parts by ensuring the right materials and processing parameters are chosen for the specific part application. The service is offered to users as a monthly subscription. As part of the acquisition, SD3D is excited to announce that they will be making the Optimatter software even more accessible by providing full access to the Optimatter web interface free of charge to individual end-users.

Founder and former CEO of 3D Matter, Arthur Sebert, states "OptiMatter is a very important tool for the 3D printing industry that 3D Matter created to help users understand the properties of their printed parts. I am very happy that OptiMatter is going to be integrated into SD3D's robust offering of automation tools because OptiMatter's data can now be connected to the rest of the 3D printing process. That's what was missing for OptiMatter users so far."

SD3D will be continuing the Optimatter service, allowing current customers to continue using the features they have come accustomed to, all while making full access to the Optimatter software free of charge for individual accounts. Furthermore, SD3D plans to integrate the Optimatter platform into their overall suite of automation software for 3D printing - providing added benefits to both the existing users of Optimatter along with users of other SD3D software products.

"The acquisition of Optimatter is the perfect fit to continue facilitating growth of the automation ecosystem we have already developed for 3D printing," said David Feeney, Founder and CEO of SD3D. "SD3D is developing 3D printing standards driven through automation and Optimatter serves a critical function in establishing those standards."

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U.S. CAD Acquires Managed Design; Broadens BIM Services Available to AEC Firms in Minnesota

22 February 2018

U.S. CAD announces its acquisition of Managed Design, an Autodesk Gold Partner that has been serving the AEC community in Minnesota and surrounding states for more than 25 years. The acquisition will support Managed Design's and U.S. CAD's shared mission of delivering professional, quality BIM solutions to partners and clients operating in the architecture, engineering, construction, and infrastructure industries.

"Managed Design has been a trusted partner for many years to firms in the local area," states Daniel J. Counts, CEO of U.S. CAD. "With U.S. CAD's expanded portfolio of BIM services, hardware, and software, the local team will now be able to provide even more value to the existing customer base. We look forward to introducing this full suite of capabilities to the Minnesota market and further strengthening our relationships with local firms."

As part of the acquisition, Managed Design will be incorporated under the U.S. CAD brand, but the company will continue to operate out of its current offices and training facilities.

"We are excited to join U.S. CAD and leverage the company's expertise to realize our shared goal of improving the quality and efficiency of design processes for our clients," states Darin Peterson, Director of Operations at Managed Design. "Our Minnesota team is dedicated to providing excellent service to our client base, and customers should be assured that business will conduct as usual during this transition."

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Company News

Accenture Opens Innovation Hub in Columbus, Adding 200 Jobs to City's Tech Community

27 February 2018

Accenture today opened an innovation hub in Columbus as part of the company's accelerated innovation investment in the U.S. The hub is designed to enable clients to compete in the digital economy by helping them modernize legacy applications, leverage disruptive technologies and take advantage of the latest IT delivery techniques.

"We are bringing our clients in Columbus, and across the U.S., the most advanced capabilities to modernize their IT to compete in the digital economy," said Julie Sweet, Accenture's chief executive officer – North America. "Our hubs are designed to help our clients innovate, implement and scale new solutions with speed and agility."

As part of its investment in Columbus, Accenture is also adding 200 highly skilled technology jobs to the market and expanding its U.S. apprenticeship program to provide under-represented groups greater

access to digital-economy jobs. Accenture's national program will grow to more than 100 apprentices by the end of 2018, building upon the success of the company's apprenticeship programs in Chicago and San Antonio.

"We are thrilled to see Accenture expand its commitment to the Columbus business and technology community with a new innovation hub," said Columbus Mayor Andrew J. Ginther. "And we are equally pleased by the opportunities they are bringing to our highly skilled workforce, with 200 jobs and much-needed apprenticeships."

Accenture uses the most advanced software engineering technologies including agile, DevOps, cloud computing and robotic process automation. The hub will be connected to Accenture's U.S. and global network of innovation hubs, bringing the company's deep expertise around the world to Columbus. The hub also includes the recently announced Accenture Pivotal Business Group (APBG), which helps enterprises migrate legacy applications to the cloud and accelerate cloud-native application development.

"The Accenture Pivotal Business Group was designed to help the world's largest enterprises move at startup speeds, by migrating applications onto Pivotal Cloud Foundry® to unlock operational efficiencies, as well as adopting next-generation software development methodologies to boost developer productivity," said Bill Cook, President at Pivotal. "We're also excited to see the expansion of the APBG into new geographical locations to meet the growing demand for the unique value our two companies bring to the market."

Located in the historic Buggyworks complex in Columbus' Arena District, the new innovation hub is the third of 10 new hubs in the U.S. that Accenture announced last year. The company's other U.S. innovation hubs are in Boston; Chicago; Houston; New York; San Jose, California; and Washington, D.C. Accenture's nationwide investment also includes a $1.4 billion commitment to training and the hiring of 15,000 new employees by the end of 2020.

"Our ecosystem partners and our talent are critical parts of the capabilities we bring our clients in the Columbus innovation hub, said Annette Rippert, senior managing director--Accenture Technology, North America. "With the Accenture Pivotal Business Group, our clients have access to specialized skills to accelerate their digital transformations. And as we grow our Columbus workforce, we are recruiting people who have deep skills in DevOps and Agile methodologies, Java and cloud computing."

Accenture employs more than 750 people in Columbus and supports local skill-development programs including Junior Achievement and i.c. stars.

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ANSYS and MachineWorks Sign Agreement to Expand Use of Polygonica

28 February 2018

ANSYS and MachineWorks signed an agreement to expand the use of Polygonica Polygon Modelling Software toolkit throughout ANSYS.

Polygonica is used in ANSYS® Discovery Live™ software, ANSYS' new tool that enables fast computation of CAE analysis results using the power of the local GPU. ANSYS Discovery Live shortens the feedback loop between design and analysis by empowering the product designer to see relevant results immediately during the conceptual design process.

ANSYS® Discovery Spaceclaim™ software was an early adopter of the Polygonica technology, which was initially used within additive manufacturing workflows. The SpaceClaim team has helped progress the Polygonica functionality to support more generic polygon-based CAD functionality.

"We are very excited that ANSYS have seen the potential for using Polygonica across their product range and we fully expect they will be driving us to deliver solutions to even more challenging polygon-based geometry problems," said Dr Fenqiang Lin, Managing Director of MachineWorks.

"The agreement with MachineWorks enables ANSYS to provide the industry-leading faceted modelling capabilities of Polygonica more broadly to our customers," said Justin Hendrickson, director, product management at ANSYS. "Our recent release of ANSYS Discovery Live brings simulation to every engineer through remarkable ease of use and dramatic speed—Polygonica extends the included geometry editing to faceted data beyond traditional CAD."

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AVEVA completes transformational combination as a new software leader is born

1 March 2018

AVEVA today announced it has combined with Schneider Electric's industrial software business to drive digital transformation across the asset and operational life cycle for capital-intensive industries. This unmatched, end-to-end offering unlocks the power of two industry leaders to deliver improved profitability and operational excellence to maximise return on capital.

"88% of leaders in capital-intensive industries say that digitalisation would increase their revenues*", said Craig Hayman, Chief Executive Officer at AVEVA. "Yet less than half of these companies are actually in the process of adopting a digital strategy. This represents an incredible opportunity for AVEVA to be our customer's digital transformation partner."

"Digitalisation demands a fundamental rethink of the way organisations operate. They need to be confident that their technology investment will deliver a high return on capital and can lower the total cost of asset ownership. AVEVA's combination of proven solutions, industry-specific knowledge and a global partner ecosystem will drive innovation across capital-intensive industries, as companies plan their digital transformation journey," Mr Hayman added.

The combination brings together AVEVA's design, engineering and construction capabilities with Schneider Electric's industrial software business, which ranges from simulation through to real-time manufacturing operations management. It creates a global leader in engineering and industrial software, expanding the markets and industries the company serves. Customers can benefit from improved profitability, efficiency and performance.

AVEVA has over 4,400 people across 80 locations in over 40 countries. Its global headquarters is in Cambridge, UK.

Industries served includes chemical; food and beverage; infrastructure and smart cities; life sciences;

mining, minerals and metals; oil and gas (upstream, mid-stream and downstream); power and utilities; shipbuilding; water and wastewater.

"The combination of AVEVA and Schneider Electric's industrial software business brings together CAPEX and OPEX, creating a path to digitalisation from conceptual design to commissioning, and from operations back to revamps. Many industrial businesses already use software from both companies and look forward to the benefits of having these products under one developer umbrella. Adding in real-time production performance moves the industry one step closer to realising a digital asset that operates with full knowledge of its physical layout as well as the underlying physics of the process being conducted. I'm excited to see how AVEVA integrates processes, products and people," said Monica Schnitger, Schnitger Corporation.

"New technologies are accelerating the merging of the virtual design and physical equipment worlds, requiring the creation of new business models that must support the convergence IT, OT and ET to enable digital services. The convergence of solutions from both AVEVA and Schneider Electric's industrial software business enables its customers to take full advantage of the complete spectrum of technologies and solutions needed to increase both their top and bottom lines to better thrive in an ultra-competitive global economy," states Craig Resnick, ARC Advisory Group.

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CBX Software Wins Green Supply Chain Award – Delivering ROI for Sustainable Retail Sourcing

27 February 2018

CBX Software announced today that they had been awarded The Green Supply Chain Award by Supply & Demand Chain Executive.

Supply & Demand Chain Executive recognized CBX software for its industry leading sustainability and green efforts by awarding them with the Green Supply Chain Award, an award given out to only the companies that best exemplify a lasting commitment to making a positive impact on the environment, while also maintaining a high level of business proficiency.

The list of companies receiving the Green Supply Chain Award were noted for either having an efficient green supply chain, or offering a supply chain, PLM, solution that enables companies to address their own supply chain inefficiencies and sustainability downfalls. John R. Yuva, editor for Supply & Demand Chain Executive, says, "Honorees for this year's award demonstrate that corporate social responsibility is a business imperative that transcends the company and extends throughout the supply chain, involving suppliers and customers," he continues, "The number of entries only increase year over year, demonstrating how critical sustainability initiatives are within companies."

Today's retailers and their suppliers often have mismatched processes and information causing inefficiencies, product issues, and bottlenecks resulting in delays in delivery. These inefficiencies can lead to a great deal of waste. Michael Hung of CBX Software says "Our clients are able to achieve their sustainable supply chain strategies by reducing the paper used in the supply chain process by using a combined retail sourcing and PLM solution. Also by digitalizing their sampling process, our clients are able to reduce the number of physical samples used in the supply chain process, which helps them to achieve their sustainable supply chain strategy."

CBX Software compresses the supply chain, helping Retailers and Brands expand assortments,

accelerate new products to market, and efficiently on board new suppliers and eliminate redundancies. CBX does all this while delivering products to market ahead of consumer expectations. Through innovative Global Sourcing Management, Product Life-cycle Management (Retail PLM), Supplier Relationship Management, and Production & Order Management technology solutions, CBX empowers the supply chain network by driving collaboration between Retailers, Brands and their Supplier Partners.

By doing this, CBX Software allows companies to achieve their sustainability and green supply chain goals. CBX hopes to leave a lasting green footprint on the companies that source through the CBX Cloud platform and is committed to helping create a sustainable future.

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DeSL Continues to Support Apparel Industry Through Association Participation

26 February 2018

Discover e-Solutions Ltd. (DeSL) is proud to announce continued support of the apparel and footwear industry by joining the American Apparel and Footwear Association (AAFA) and attending the AAFA Executive Summit on February 28 – March 1, 2018.

The AAFA Executive Summit assembles senior level executives from US retail, apparel, footwear, and fashion accessory brands to discuss the profound disruption and great innovation seen by the industry over the past several years. This year's Executive Summit – REBOOT, REIMAGINE, REINVENT – focuses on thriving in the face of great change, and growing through innovation and creative leadership.

"With the significant changes the industry is experiencing, the Executive Summit provides a solid platform for executives to share and collaborate on challenges, such as supply chain demands, and explore the technology world before us, such as virtualization and digitalization," states Pam Peale, Director of Sales, North America for Discover e-Solutions Ltd (DeSL).

"Membership in AAFA provides us an opportunity to learn and promote best practices and innovation, continuing the success and growth of the apparel and footwear industry."

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DeSL Opens San Francisco Office

27 February 2018

Discover e-Solutions Ltd. (DeSL) announces the opening of a San Francisco location.

"The decision to expand our presence to San Francisco area was a logical step in our strategy," stated Julian Mussi, Vice President of Business Solutions for DeSL. "Along with the ability to service our current and future clients, the San Francisco area is rich with talent providing the opportunity to further expand staffing and capabilities in our software engineering, professional services and customer support departments."

The new location, DeSL's third office, supports the company's global strategy and accelerated growth.

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Infosys and PTC Launch Industrial IoT Center of Excellence

20 February 2018

Infosys today announced the launch of a joint Center of Excellence (CoE) with PTC, a global provider of technology platforms and solutions, at the Infosys campus in Bengaluru. This CoE will focus on solutions for brownfield as well as greenfield industrial setups.

This CoE will build on Infosys' Industry 4.0 thought leadership, deep knowledge of traditional product engineering and industry domains, along with the understanding of clients' existing assets, products and production lines grounds up. On this strong foundation, Infosys will continue to make targeted investments in building vertical-specific solutions leveraging technologies of tomorrow, including an extensive Internet of Things (IoT) ecosystem that leverages the PTC ThingWorx® industrial innovation platform, to help customers realize the tangible benefits of Internet of Things (IoT).

Ravi Kumar, President & Deputy Chief Operating Officer, Infosys, said, "PTC is a strategic global partner for us. Based on our strong foundation of product engineering excellence, we will be able to create applications like product lifecycle management (PLM) solutions, Augmented Reality (AR) experiences and service lifecycle management (SLM) solutions leveraging their ThingWorx IoT platform. Together we will accelerate digital innovation and drive significant business outcomes for our clients."

Catherine Kniker, Chief Revenue Officer, ThingWorx, PTC, said, "We have the most robust IoT technology in the world enabling organizations to improve the way that they design, manufacture, sell, operate, and service their products. Our joint Center of Excellence (CoE) with Infosys in Bengaluru will help enterprises transform and generate significant value in today's competitive business landscape."

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International TechneGroup (ITI) announces expansion of their German operation

27 February 2018

International TechneGroup Incorporated (ITI) is proud to announce that their UK operation, International TechneGroup Ltd., has expanded its organization at their offices in Landshut, Germany (Munich).

ITI is enjoying an increase in demand for CAD consolidation projects as part of PLM system migrations with major companies throughout Germany, Austria and Switzerland (the DACH region). Customers are working with ITI to deploy the Proficiency solution to successfully migrate intelligent, fully-featured CAD models between the major CAD systems. This ensures the retention of their investment in legacy design data and provides instantly reusable models in their new design system.

As Model-Based Enterprise (MBE) initiatives continue to expand across Europe, the need for 3D CAD model validation throughout the product lifecycle is rapidly becoming a mission critical issue for engineering enterprises. MBE model stability and robustness, as well as the validation of derivative 3D models converted for delivery to customers and manufacturing partners or exported for long term archival solutions (LOTAR), are all vital aspects to address. Here, ITI is increasingly helping customers

validate their CAD data with the proven CADIQ solution.

Expanding the German operation is a natural response to this increasing demand for ITI's advanced interoperability solutions across the DACH region, and to the greater demand for commercial and technical resources across Europe in general. As the first step in an ambitious growth plan, Mr. Rene Bosiacki has been promoted to be Account Manager for ITI's German branch office. Previously Mr. Bosiacki supported marketing and business development initiatives across Europe as part of ITI's UK operation. ITI will continue to add technical and sales resources to support their valued customers throughout Europe.

This expansion is also important to address the significant interest and adoption of the CADfix solution. CADfix enables customers to convert and simplify large MCAD models as they are shared across diverse CAD, CAM, and CAE applications, and as they are integrated with plant and process design systems.

Andy Chinn, Managing Director of ITI's European business commented, "Having had a presence in Europe for many years, the expansion of our German operation and Rene's promotion forms a vital part of our strategic plans. It will enable our dedicated team to provide greater attention to our European customers as we support the successful roll-out of CADfix, CADIQ and Proficiency solution implementations and, of course, solidify our presence in the DACH market."

"I look forward to helping even more customers solve the challenges they face as they evolve to meet constantly changing manufacturing design data needs. The prospects for business growth opportunities ahead are very positive," added Cecil Lewis, Manager of European Business Development for International TechneGroup Ltd.

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Lantek obtains the "Omax Compatible Partner" certification for cutting machines

23 February 2018

Lantek has obtained the "OMAX Compatible Partner" certification from the American manufacturer OMAX Corporation. As from now, Lantek is part of the exclusive ecosystem of companies certified by OMAX. This announcement was made by the company, which from now on will be able to integrate its Lantek Expert solution in OMAX water jet cutting machines to jointly meet the demands of the market in terms of productivity and effectiveness.

Water jet cutting machines are designed to cut any material, since they do not cause heat warping. For this reason, they are used in different sectors where high precision is required, such as aeronautics, marble, naval and rail, among others. These machines provide great quality in the finishing.

As explained by Francisco Pérez, Lantek's OEM Channel Director "all our customers will be able to take advantage and benefit from the compatibility of our software with one of the world's largest manufacturers of water jet cutting machines, since our software will optimize even more the capabilities of OMAX machines. We are very excited about the agreement we have reached."

"Lantek's certification is another example of how OMAX works closely with software companies to deliver powerful solutions to manufacturing customers on a global scale," explains Stephen Bruner, Vice President of Marketing for OMAX. "Our Compatible Partner program connects customers with third-

party suppliers and also encourages these suppliers to develop software that improves the productivity of OMAX customers and machines."

In this regard, this certification is part of the Lantek Partners Program to integrate its solutions and technology in the cutting machines of the leading manufacturers around the world. Through these solid product integrations, the company seeks to boost and strengthen both its relationship with partners and customers, and generate greater synergies. It also aims to maximize and simplify implementations and improve interoperability, increasing the features and productivity of users.

In this way, and with the help of its partners, OMAX and Lantek will be able to better address the opportunities and growth of the sector, as well as to satisfy the demands of the market in terms of productivity and effectiveness.

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Siemens and Partners Sign Joint Charter on Cybersecurity

16 February 2018

At the Munich Security Conference, Siemens and eight partners from industry signed the first joint charter for greater cybersecurity. Initiated by Siemens, the Charter of Trust calls for binding rules and standards to build trust in cybersecurity and further advance digitalization. In addition to Siemens and the Munich Security Conference (MSC), the companies Airbus, Allianz, Daimler Group, IBM, NXP, SGS and Deutsche Telekom are signing the Charter. The initiative is further welcomed by Canadian foreign minister and G7 representative Chrystia Freeland as well as witnessed by Elżbieta Bieńkowska, the EU Commissioner for Internal Market, Industry, Entrepreneurship and Small and Medium-sized Enterprises.

“Confidence that the security of data and networked systems is guaranteed is a key element of the digital transformation,” said Siemens President and CEO Joe Kaeser. “That’s why we have to make the digital world more secure and more trustworthy. It’s high time we acted – not just individually but jointly with strong partners who are leaders in their markets. We hope more partners will join us to further strengthen our initiative.”

The Charter delineates 10 action areas in cybersecurity where governments and businesses must both become active. It calls for responsibility for cybersecurity to be assumed at the highest levels of government and business, with the introduction of a dedicated ministry in governments and a chief information security officer at companies. It also calls for companies to establish mandatory, independent third-party certification for critical infrastructure and solutions – above all, where dangerous situations can arise, such as with autonomous vehicles or the robots of tomorrow, which will interact directly with humans during production processes. In the future, security and data protection functions are to be preconfigured as a part of technologies, and cybersecurity regulations are to be incorporated into free trade agreements. The Charter’s signatories also call for greater efforts to foster an understanding of cybersecurity through training and continuing education as well as international initiatives.

“Secure digital networks are the critical infrastructure underpinning our interconnected world,” said Canadian foreign minister Chrystia Freeland. “Canada welcomes the efforts of these key industry players to help create a safer cyberspace. Cybersecurity will certainly be a focus of Canada’s G7

presidency year." The matter is also a top priority for the Munich Security Conference. “Governments must take a leadership role when it comes to the transaction rules in cyberspace,” said Wolfgang Ischinger, Chairman of the Munich Security Conference. “But the companies that are in the forefront of envisioning and designing the future of cyberspace must develop and implement the standards. That’s why the Charter is so important. Together with our partners, we want to advance the topic and help define its content,” he added.

According to the ENISA Threat Landscape Report, cybersecurity attacks caused damage totaling more than €560 billion worldwide in 2016 alone. For some European countries, the damage was equivalent to 1.6 percent of the gross domestic product. And in a digitalized world, the threats to cybersecurity are steadily growing.

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Siemens wins first place for "Best Idea Management"

1 March 2018

Siemens was awarded top honors for its idea management program at the German congress of the Zentrum Ideenmanagement ("Idea Management Center"), which took place in Fulda over the last two days. Within the framework of "3i ideas – initiatives – innovations," as the Siemens idea management program has been called since 1997, the ideas, initiatives and innovations of Siemens employees continue to contribute to the company's success today. Under the program, Siemens employees submitted more than 160,000 suggestions – or an average of more than 400 a day – in fiscal 2017. Nearly 125,000 of these ideas were ultimately implemented, bringing Siemens benefits last year totaling over €300 million – more than ever before.

"Our employees' knowledge and personal commitment are decisive for our company's success. We want to leverage this vast potential in order to make our processes even faster and more secure, to make our products even better and to increase customer value. The 3i program plays a key role in this regard since it gives us a way to call for and foster entrepreneurial thinking and entrepreneurial action," said Janina Kugel, Siemens' Chief Human Resources Officer.

Idea management has a long tradition at Siemens. The first recorded employee suggestion dates back to 1889. The first rules and bonuses for suggestions were set down in writing in 1910. Idea management has thus been a reality at Siemens for nearly 110 years. The 3i program is actively supported at the Group level by Chief Human Resources Officer Janina Kugel. It is supported at the Divisions and Regional Companies by the relevant CEOs. The idea management program is also closely linked to other Siemens initiatives – for example, the Werner von Siemens Award and the IT Hackathon.

Overall, some 40 companies – including many distinguished enterprises on Germany's DAX stock index – presented their idea management programs to the Zentrum Ideenmanagement. This was the first time that Siemens had entered the competition, and its 3i program was the clear winner industry-wide.

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Tata Technologies Becomes NIO's Preferred Engineering Partner for Its EV Range

27 February 2018

Tata Technologies today announced a close association with NIO China, a leading new-generation electric car company, in the complete product development process of NIO's range of electric vehicles. The association between the two companies commenced with collaborative engineering for NIO's first electric all-aluminum vehicle, the ES8, which NIO intends to be their first product positioned in the Chinese electric vehicles mass market.

Talking about this association, Mr. Warren Harris, Managing Director & Chief Executive Officer for Tata Technologies, said, "ES8 is an important milestone for the automotive industry. The 7-seater high-performance electric SUV is a mobile living space on wheels. It has been a privilege for Tata Technologies to partner with NIO on this breakthrough product. Our close working relationship in the areas of Lightweighting, Connected Vehicles and Product Lifecycle Management (PLM) is a great example of the type of partnerships that will define the future automotive ecosystem. Moreover, our ability to serve NIO through the capabilities that we have in China, India, UK and USA is a testament to the investment we have made in our global capabilities. We look forward to our partnership with NIO developing at scale."

Mr. Roger Malkusson, Vice President, Vehicle Engineering for NIO, recognized Tata Technologies' contribution, and said, "We have an ambitious goal of delivering a new premium user experience with electric vehicles that will set benchmarks globally and Tata Technologies is our partner of choice to help achieve this. They were able to pool in experts and teams from China, India, UK and Romania to work together with the NIO engineering team to deliver the final product which adhered to the highest standards in safety and finesse. The first finished product, ES8, is an all-aluminum SUV that broke lightweight index benchmarks and was delivered in record time from a blank page to a validation vehicle in world class duration."

The two companies initiated their association in mid-2015, very close to NIO's inception as an ambitious next-gen EV startup. Since then, Tata Technologies has engaged with NIO to drive major engineering aspects related to the development of ES8, such as Body Structures, Closures & Exteriors, Advanced Manufacturing Engineering, PLM, and Off-car Connectivity. Tata Technologies, in this strategic association with NIO, utilized its globally distributed execution model and extended its proven expertise in out-of-the-box engineering processes.

With the goal of creating a product-development process that would establish an industry benchmark, NIO and Tata Technologies have worked on a range of concepts on weight optimization using advanced materials. The team has worked on creating a process that would pioneer the way for more advanced material based vehicles in China. The result of implementing such expertise is that the ES8 is currently achieving Body Weight Efficiency targets better than the EuroCarBody Conference best.

The association has also achieved significant technological milestones in the PLM domain. The team successfully led and implemented the 3DEXPERIENCE® 2016x (Dassault Systèmes) solution. It was delivered by Tata Technologies' global talent and is another first in the next-gen EV Original Equipment Manufacturer (OEM) landscape, enabling engineers to accelerate the product development lifecycle through concurrent engineering.

The electric vehicle and connected car industries are on the cusp of making intelligent transportation dreams a reality. While there has been a global increase in the demand of technologically-enhanced electric vehicle components like embedded infotainment systems, intelligent transportation systems, etc.,

the South and East Asia markets are the best bet for the development and manufacturing of smart cars.

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Upchain Raises $7.4M in Funding to Expand Business Development Into the US and Europe

28 February 2018

Upchain today announces it has raised $7.4M CAD in funding. The round was led by OpenText Enterprise Apps Fund (OTEAF) and BDC Capital (BDC) and will help Upchain expand the solution offering and business development into the US and Europe.

The company also announces that Richard Black, General Partner at OTEAF, as well as Sean Brownlee, Partner at BDC Capital's Industrial, Clean and Energy (ICE) Technology Venture Fund, will be joining Upchain's board.

Upchain, a portfolio company of Canada's largest SaaS accelerator, L-SPARK, offers affordable Product Life Cycle Management (PLM) solutions to all stakeholders in the product development chain as well as post-sales support. Their tools are designed for companies that manage rapidly changing products, those that work with multiple suppliers and producers, and those with design and manufacturing operations distributed across multiple locations.

"In the past, PLM projects have depended on large, expensive enterprise solutions that rarely met the customer's expectations. A company's only option today is to use spreadsheets, emails and FTP sites to collaborate across the value chain. Upchain is changing this, bringing collaboration to all levels of sales, design, manufacturing and service – doing so on the cloud with a solution that is scalable and gets your organization up and running in minutes," says John Laslavic, founder and CEO of Upchain.

The Upchain platform is designed to address a number of issues that have long hindered communication and collaboration between all stakeholders involved in the product lifecycle. The platform aims to make PLM less expensive, more efficient, and easy to implement.

Traditional PLM tools are designed by engineers specifically for engineers. Meanwhile, when a purchaser, salesperson, or someone else in the value chain requires information on the product, they waste time contacting the engineer for data. Upchain, on the other hand, syncs all departments on a common understanding. All parties now have real-time access to rapidly changing product and engineering data. This allows a company to bring products to market faster and with better quality, in 20-50% less time.

Communication with clients' and suppliers' systems is another typical obstacle of PLM. Upchain makes working across the value chain efficient and cost-effective through an interface that integrates these disparate data sources, eliminates delays, reduces errors, frees up resources, and facilitates client audits.

What's more, unlike traditional PLM tools, Upchain is built on a hybrid multi-tenant cloud. Instead of customers having to install various, expensive platforms that don't collaborate well together, Upchain offers true cloud capacity all on one platform.

"Upchain's platform is bringing some important changes to PLM and we're really excited to support them in this going forward. The company has a strong product, excellent customers, and an experienced team that has had previous success in building outstanding software companies," adds Richard Black, General Partner at OTEAF.

"BDC Capital believes Upchain is going to make PLM projects more affordable and more efficient. They have assembled an all-star leadership team with years of experience and a keen understanding of the snags slowing down PLM. We're very excited to invest in Upchain because their platform can solve a real problem," says Sean Brownlee, Partner at BDC Capital's Industrial, Clean and Energy (ICE) Technology Venture Fund.

Executive Managing Director of L-SPARK, Leo Lax, acknowledges the importance of a company like Upchain saying, "We are thrilled that Upchain, in partnership with its new investors, will continue to expand the PLM industry with an accessible and efficient, cloud-based platform."

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Events News

Altair to Host Multibody and System Simulation Technology Conference 2018 in Turin, Italy

1 March 2018

Altair invites technical managers, R&D, system and control engineers, product creators, and everyone interested in system simulation development approaches and multibody simulation to its technology conference - "ATCx: Multibody and System Simulation Conference 2018". The event takes place on March 13th, 2018 at the Centro Congressi Unione Industriale in Turin, Italy.

To meet market demands for ever shorter development cycles, engineers face the challenge to develop better, lighter, and more powerful systems for increasingly complex products. The Altair event in Turin addresses the growing needs of multi-discipline engineering such as electric actuation, control of flexible mechanisms or computing external fluid loads on systems.

Customer presentations from renowned companies such as Ankers, Magna Steyr, Schneider Electric, SpinMag, Tadano Faun, and ThyssenKrupp Elevator will focus on how systems and multibody simulation helps them develop better products faster and will discuss industry trends such as the Internet of Things (IoT), the Digital Twin and E-mobility. In addition, this event offers the opportunity to network with other industry experts and to meet Altair's Activate™ and MotionSolve® development team leads, who will present Altair's roadmaps and future development strategies for its systems and multibody simulation tools.

"This event will be a unique opportunity for customers from all over Europe to learn how others are successfully using HyperWorks® and the Altair methods to effectively meet their development challenges," said Dr. Michael Hoffmann, Sr. Vice-President for Math & Systems Solutions. "Attendees will also have the chance to interact with our development teams to get first-hand information about Altair's development strategies for Activate and MotionSolve. I'm looking forward to meeting our customers and to listening to the presentations by those who already use our development strategies and tools successfully within their product development processes."

Activate is Altair's 0D/1D system simulation solution that enables product creators, system simulation and control engineers with a block diagram environment to model, simulate and optimize multidisciplinary systems. MotionSolve is Altair's solution for full 3D flexible multibody simulation.

The conference language medium is English. For more information on this cost-free full-day event and to register, please visit http://www.altairatc.com/EventHome.aspx?event_id=1141.

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Aras Announces Audi, BMW, L3, Microsoft, and Schaeffler to Headline ACE 2018 Global Conference on Digital Transformation

26 February 2018

Aras today announced that speakers from Audi, BMW, L3, Microsoft, and Schaeffler will headline ACE 2018, the global conference for the Aras community, scheduled for March 20-22 in Indianapolis, IN. In addition, David J. Kappos, former director of the U.S. Patent Office, will discuss innovation.

Aras' three-day event addresses the challenges manufactures face in developing smart, connect products. The conference is expected to draw more than 450 attendees representing product development, manufacturing, and IT from automotive, aerospace and defense, industrial, and other manufacturing industries. The ACE agenda includes more than 60 sessions across four conference tracks as well as hands-on training to help practitioners jumpstart digital transformation with the Aras PLM Platform. Full agenda details and registration are available at www.ace2018.aras.com.

ACE 2018 will also showcase the latest open release, version 11 SP12, of the Aras PLM Platform which features configurator services for variants & options. Companies may download this software at no charge by visiting www.aras.com/support/downloads/.

"Aras' success has always been predicated on our open dialogue with the PLM community," said Rob McAveney, Chief Architect, Aras. "All community members, whether they are Aras subscribers or not, can have input into our company direction and product roadmap. This is a central reason why people attend ACE – for unfiltered, frank discussion about the problems our industry needs to solve. From what we've done to what we've missed, ACE is always the start of our next set of conversations."

Premium conference sponsors include Axis Technologies, BigLever Software, Design Automation Associates, IpX – Institute for Process Excellence, Minerva, No Magic, Razorleaf Corporation, The vdR Group, and Zionex. Standard conference sponsors include Accenture, EBD Advisors, Essig PLM, Infosys Limited, ITI, Kisters, Plural Technology, Prolim PLM, XPLM Solutions, and Zuken.

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ESI Delivers its Smart Virtual Prototyping Solutions for Composites at JEC World 2018

1 March 2018

ESI Group announces that it will attend JEC World 2018 next month in Paris, France. From March 6 to 8, key actors in the field of composite materials will gather for this international trade show. ESI will present its software solutions for manufacturing composite structures; solutions that help engineers detect and resolve defects early in the product development cycle. Visitors will gain insight into design, engineering and evaluation of the performance of lighter components using advanced light materials and joining technologies. Through live demos and presentations, ESI's team will show visitors some of the

most powerful solutions available for a wide range of industrial applications.

At ESI's booth (Hall 5, Booth N68) visitors will learn how simulation helps industrial manufacturers replace real prototypes with virtual ones and virtually manufacture, assemble, test and pre-certify their future products.

Showcasing 15 Live Presentations of Collaborative Innovation Projects

Visitors to booth N68 will have the opportunity to learn of the latest innovations and approaches in Thermoforming, Compression-RTM and Sheet Molding Compound (SMC) methods, and to discover related topics in Big Data and Analytics and Machine Learning. The team will speak of its numerous collaborations with international clients and academics – including TU Dresden, for End-to-End Virtual Prototyping the AIMEN Technology Center, for Thermoplastic Composite and Metal Joining. Participants will have the opportunity to see a USCAR (Ford, GM, and Chrysler) composite element at the ESI booth and attend a live presentation on the design of a composite front bumper crush-can system using virtual prototyping. Case studies and collaborative projects that highlight the power of composites materials include:

- Electrical Vehicle gearbox demonstrator development - in collaboration with ARRK Shapers'
- Optimization of dry textiles forming for structural composite applications - in collaboration with IRT M2P
- Sheet Molding Compound (SMC) process modeling
- Chaining Manufacturing to evaluate Multi-Material Component Performance
- Accurate C-RTM (Compression Resin Transfer Molding) Modeling

Professor Maik Gude, Technische Universität Dresden (Germany); Institute of Lightweight Engineering and Polymer Technology (ILK) and Frederic Masseria, Business Development Manager Composite Solutions at ESI Group in Germany will present a new development approach for 3D hybrid structures at booth N68. They will discuss how the implementation of new composite materials in a large-scale production environment can only be achieved through the design of multi-material components and explain how ESI's virtual prototyping simulation software allows virtual structural assessment of manufactured components.

Introducing ESI's Hybrid TwinTM applications for the Industry 4.0

On the 1st day of the event, Professor Francisco Chinesta, President of the Scientific Committee at ESI Group will present the on-going partnership with CANNON, an international engineering solutions supplier. The Hybrid Twin™ in Composite Factory 4.0project exploits ESI's new vision for a complete virtual representation of a production line, replicating it in a virtual world and allowing real-time control and decision-making. Deployed for the RTM (Resin Transfer Molding) composite manufacturing chain, the Hybrid Twin™ methodology constitutes a new paradigm in simulation-based engineering sciences to support the Factory of the Future. Connecting every step of the manufacturing process ESI and CANNON collaborate to illustrate for manufacturers the power of combining pioneering technologies in System Modeling, Cloud delivery, Data Analytics, and Machine Learning.

Presenting the 1st Gazelle Tech Car Development

Gazelle Tech, a French startup created in 2014, is the first peri-urban composite vehicle manufacturer of its kind. Featuring a composite chassis and body technology that makes it one third the weight of its

competition and reduces energy consumption by half, their vehicle is currently under development and the industrial version is expected to be released later this year. This innovative French company will join ESI's booth to share their experience of using virtual prototyping to engineer and pre-certify their vehicle. As Gaël LAVAUD, CEO at Gazelle Tech commented "ESI Virtual Performance Solution saves us time and money. We are able to validate virtually the performance of our innovative composite vehicle before even manufacturing the first real prototype."

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More Than 30 Premier Organizations Announce New Products at Advanced Design and Manufacturing Cleveland 2018

1 March 2018

Advanced Design and Manufacturing (ADM) Cleveland, Ohio's only comprehensive design and manufacturing event, today announced it will host more than 30 exhibitors debuting new products and services at this year's event. ADM Cleveland takes place March 7 - 8, 2018 at the Huntington Convention Center and expects more than 2,600 design and manufacturing professionals in attendance. ADM Cleveland will also feature five dedicated expo zones including automation, manufacturing, medical technology, packaging and plastics, where industry professionals can find everything they need to know about each respective field. To register for a media pass, please visit: cleveland.am.ubm.com/2018/registrations/Media

"Now in its second year, ADM Cleveland will continue to enhance the future of design and manufacturing, bringing together leading companies on the cusp of innovation," said Nina Brown, vice president of events, UBM. "The products and services our exhibitors demo at the event showcase the forward-thinking that is taking place within the industry, and I'm confident our attendees will take away a great deal from this year's expo."
To see a full list of exhibitors, please visit https://globenewswire.com/news-release/2018/03/01/1409312/0/en/More-Than-30-Premier-Organizations-Announce-New-Products-at-Advanced-Design-and-Manufacturing-Cleveland-2018.html

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Zuken USA Announces No Magic's CTO as Keynote Speaker at Annual Innovation Event

27 February 2018

Zuken is pleased to announce Enrique Krajmalnik, Chief Technical Officer at No Magic, as Keynote speaker for Zuken Innovation World (ZIW) 2018 Americas. Zuken USA's annual user and technology conference will be held on April 23-25 in San Diego, California.

Krajmalnik will speak on "Model Based Systems Engineering Today and What's Next", explaining why companies today are investing in the development of new standards, methodologies and technologies as they shift from the practice of systems engineering to smarter, model based systems engineering (MBSE) practices. This shift, Krajmalnik will explain, is key to helping enterprises stay competitive in the systems engineering world and underscoring that now more than ever, MBSE is one of the most

important topics for industry.

As Chief Technology Officer of No Magic, Krajmalnik guides and directs the company's technical resources. Before joining No Magic, Enrique co-founded several technology companies ranging from software development, to IT services and cloud/SAAS delivery platforms.

Education and Innovation

The ZIW conference features more than 40 classes focused on education, with topics covering best practices, customizations and innovative design processes. Participants will hear from customers and partners on their top-of-mind topics, and find out how Zuken is playing a role in their success. Zuken University classes will focus on upcoming software releases and advancing product knowledge and skills. The popular Expert Bar will return with six stations offering 1:1 access to Zuken's technical experts, and a hands-on look at the latest product releases.

Event Highlights

Further highlights of the packed, four-track agenda include:

- Expanded customer and partner participation including: Ansys, Aras, Ford, Intel, No Magic, Northrup Grumman, PTC, SiliconExpert, Texas Instruments, United Launch Alliance, XJTAG and others
- Zuken 2018 release plans and highlights
- Technology Showcase featuring Zuken and partner solutions
- New Zuken 360 forum
- Golf event at the Coronado Golf Course and a conference dinner overlooking San Diego Bay.

For more information, or to register for the event, see www.zuken.com/ziw-us

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Implementation Investments

Aeronamic selects Aras and Minerva for their PLM implementation

28 February 2017

In their pursuit of becoming a world class supplier of sub-systems and components for the aerospace industry, Aeronamic has selected Aras Innovator as their new PLM platform.

Aeronamic is a Dutch high-tech company that develops, manufactures, tests and maintains complete high-speed rotating systems for the aerospace industry. Their products can be found in Airbus and Boeing aircrafts as well as on F-35 Joint Strike Fighter and Gulfstream Business Jets.

Aeronamic looked for a platform with an intuitive architecture that could enable the storage of all important data in one central location.

"We, as a company, want to grow. To do so, we have to take care of this labour intensive data-handling structure. We need to be able to share information. Mouth-to-mouth communication for information exchange is no longer a viable strategy," says Ronny Blaauwgeers, Director of Manufacturing

Engineering at Aeronamic. He continues:

"Ultimately, everybody decided that Aras is a better fit for us, for what we want to do with our data. When we saw a demonstration of the flexibility of Aras in managing all types of data, we were impressed how easy it was to create workflows and quality templates. We all thought: Ok, it is ready to use. Let´s do it," says Ronny Blaauwgeers.

Aeronamic was suffering from an unclear data structure

It was getting increasingly difficult for Ronny Blaauwgeers and his colleagues to maintain a clear overview over documentation, personnel and other data sets.

"For instance, we had an Excel file with a list of people that are qualified to do a certain job. We managed our EBOM in an Access database and our MRO records in another Access database. I can name a lot of similar examples, but the idea is that these systems were not connected and was containing identical information."

Aeronamic will use Aras Innovator as a "Digital Factory"

Establishing a transparent connection between (E)BOM, (M)BOM, and (P)BOM is of high importance for Aeronamic. The goal is to create a "Digital Factory" which allows easy and fast access to information from different locations and allow their employees to work simultaneously on the same project without losing track of any changes made in the process.

"There are a lot of benefits from Aras, but the top is that (E)BOM, (M)BOM, and (P)BOM are all linked in the system in a very intuitive and straight-forward way. There is still some manual work between the ERP system and Aras, but soon we will have them linked as well. And by mid-2018, I hope we will have all documents stored in Aras and we have realized the Digital Factory," says Ronny Blaauwgeers.

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Capgemini is selected by Terumo BCT to deliver global innovation and development centers

26 February 2018

Capgemini today announced that it has been selected byTerumo BCT to set up two global innovation and development (I&D) centers in India. Working together, Capgemini and Terumo BCT will use the I&D centers to help build next-generation platforms for Terumo BCT's devices.

Capgemini was selected, due to its knowledge of the medical devices sector, its expertise in innovative technologies for next-generation connected healthcare, including the Internet of Things (IoT), and artificial intelligence (AI), as well as its agility and ability to scale for a faster launch to market. Under the agreement, Capgemini will deliver a multi-disciplinary engagement across research and development, product engineering, and usability engineering.

"As technology helps us unlock the potential of blood and cellular therapies, it makes perfect sense for us to collaborate with Capgemini. Their global expertise and best practices from other industries will help us bring about the next-generation of connected medical devices," said Palani Palaniappan, Executive Vice President, Innovation and Development, Terumo BCT.

With its innovations, U.S.-based Terumo BCT serves blood centers, hospitals, therapeutic apheresis

clinics, cell collection and processing organizations, researchers and private medical practices in more than 130 countries.

“Capgemini is a trusted engineering partner for medical device companies, helping to enable the digital transformation of their products to address the changing needs of a connected healthcare ecosystem,” said Sanjay Salunkhe, Global Head of Product and Engineering Services, Capgemini. “We are pleased to have been selected by Terumo BCT to help develop innovations that could become industry standards, improve clinical outcomes and lower the costs for their customers.”

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Centric Software Partners with DRYKORN

27 February 2018

Centric Software announces that DRYKORN has selected Centric Software to provide its Product Lifecycle Management (PLM) solution.

In the past decade, DRYKORN has expanded rapidly. As Florian Reusch, Chief Digital Officer at DRYKORN explains, the company outgrew its existing systems for managing merchandise planning and product development.

“We were working with a combination of Excel spreadsheets, email, Word documents, PDFs and a PDM system which our needs had outpaced,” says Reusch. “Information was distributed across different formats and channels, which made it difficult for people to access the data they needed. There was no centralized database, and our existing system was not set up to handle timelines, merchandise planning or workflows.”

“We used to just produce two big collections a year, but now the market demands more segmented collections within smaller windows. Every time we did a pre-collection or a trend update, it had to be handled using a new set of documents and spreadsheets. This created a lot of inefficiency and trouble for our product development teams.”

DRYKORN spent two years carefully evaluating PLM solutions and Centric Software immediately won favor with their teams.

According to Christian Oertel-Korfhage, from DRYKORN’s IT team, “After the first Centric presentation, people were so excited by it they said, ‘When can we start?’ The interface is modern and easy to understand, with a very strong IT platform behind it. Centric offers everything we wanted from a PLM system. Centric’s customer references are very convincing, as they include some of the biggest players in our market. Also, Centric is extremely communicative with customers about the latest updates and trends in the industry. They have a lot of expertise in fashion.”

“Creative product design and development are the foundation of our enterprise and we need the right tools to help people involved in those areas in order to support our future growth,” says Reusch. “We anticipate having more transparency and streamlining our operations, making it possible for everyone to access the correct information instantly from a centralized database.”

“The Centric team has been absolutely professional to work with,” Reusch concludes. “We look forward to beginning the implementation – we’re working together in a nice atmosphere and Centric really understands the needs of their customers.”

“We are very happy to welcome DRYKORN as our latest customer in Europe,” says Chris Groves, President and CEO of Centric Software. “DRYKORN is an established German brand with a strong international presence, known for its smart style and high-quality fabrics and workmanship. We’re delighted partner with them as they continue to grow.”

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Sundiro Honda opts for CIM Database PLM from CONTACT Software

27 February 2018

Sundiro Honda Motorcycle Co., Ltd. has carried out a sophisticated system selection focused on optimizing its engineering and collaboration processes, selecting CIM Database PLM and CONTACT Workspaces as the best solution. With the PLM applications from CONTACT Software, the company aims to provide product data and documents centrally and manage its dynamic development projects consistently and efficiently.

“CONTACT's open component architecture convinces with state-of-the-art web technology and powerful applications for the product development process," says Biao Zhang, Director General Research & Development at Sundiro Honda. "So we have the option to expand our PLM environment step by step and are well positioned to meet future market requirements."

Sundiro Honda is a Chinese-Japanese joint venture with around 3,800 employees, in which Sundiro Holding and Honda each hold 50% of the shares. The company has meanwhile launched more than 50 motorcycle models with Honda technology for passionate bikers and racing. Each year, the two production plants in China produce more than 1 million motorcycles and the same number of motor units. The product portfolio also includes scooters, which are increasingly supplied with an electric drive, and e-bikes.

Sundiro Honda is supported by CONTACT's Shanghai-based partner E-UCI, who brings its extensive expertise in the automotive & mobility sector to the project. The introduction of CIM Database starts with CAD data and document management. Other solution modules include the management of change processes, project management and controlling, and SAP data and process synchronization. E-UCI is supported by CONTACT's international professional services team.

“The products of Sundiro Honda are technological leaders and in demand worldwide," says Michael S. Murgai, Director of International Sales & Partner Management at CONTACT Software. “We are proud to contribute to greater efficiency and productivity in Sundiro Honda's product development processes and look forward to working with them.”

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TM Couture Selects Visual Next End2End Solutions

1 March 2018

Visual Next is delighted to announce that it has been selected by Canadian mattress cover manufacturer, TM Couture.

TM Couture's business processes will be completely streamlined, and all current manual processes will be eliminated thanks to the implementation of the Visual Next End2End Omnichannel Solution. TM Couture will utilize Visual Next's PLM, ERP, SCM, WMS, SFA, ECOM, BI, as well as Visual RTS, Visual Next's new and improved Shop Floor management tool. Visual PLM will grant their business total control of the product development process, while Visual ERP and Visual BI will grant them access to real-time reporting and statistics.

TM Couture manufactures all of their products, from idea to delivery, using a method that puts the unique needs of their customers first. All designs and samples are built and sourced with quality workmanship and materials. Visual PLM will play a key role in their product development process, by streamlining their design, conception, material sourcing and more. Furthermore, Visual RTS will provide full visibility of TM Couture's production with real-time shop floor monitoring that tracks every detail, from product to worker output, in a fully traceable and transparent fashion.

Maxime Thériault, Owner of TM Couture, explains, "TM Couture is in a business environment where our success depends on our ability to rapidly respond to changing business requirements. We were looking for a fully integrated end-to-end software solution that could assist all our departments. The Visual End2End suite will be able to completely connect our business, by allowing information to be shared across all departments, in real-time. We are confident that this will allow TM Couture to optimize our business processes and work more efficiently. We are looking forward to growing our business roadmap within the domestic and international markets with the support of the Visual Next suite."

"We are looking forward to working with such veterans in the knitting market," exclaims Sam Edery, International Business Development of Visual Next. "We are confident that Visual Next's array of software will benefit the company by allowing them to move even faster from conception to production. Visual Next is known for our Out-of-the-Box solution built for quick deployment and powerful configuration to accommodate unique products, such as TM Couture's specialized quality knitting."

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Product News

HARMAN to Extend Existing IIOT Collaboration with PTC to Create Groundbreaking Mixed Reality Platform for Enterprises

26 February 2018

HARMAN International, a wholly-owned subsidiary of Samsung Electronics Co., Ltd. focused on connected technologies for automotive, consumer and enterprise markets, today announced its intent to extend its IIoT collaboration with PTC to integrate AR functionality into its HARMAN Media Suite with PTC's Vuforia® AR platform.

Already collaborating with PTC and leveraging its ThingWorx® Industrial Innovation platform and tools, this integration will truly transform the workplace by adding mixed reality to HARMAN's existing solution, enabling enterprises to create immersive, next-generation content for training, communications and additional field service enablement.

With worldwide spending on augmented reality and virtual reality projected to reach $17.8 billion in 2018, HARMAN and PTC are partnering to lead the way in this innovative era by placing cutting-edge

mixed reality technology into the hands of enterprises.

"While most people focus on the splashy consumer-focused applications of AR, its biggest impact in the near term is actually going to be in business, where it can provide the ability to see and understand things in entirely new ways," said Bob O'Donnell, president of TECHnalysis Research. "By seamlessly integrating video and AR content, HARMAN and PTC are providing not only an easier way for companies to leverage existing video resources in this new medium, but an opportunity to create training and learning materials that are more engaging, more exciting and, ultimately, more effective."

HARMAN's Media Suite is a Video Content Management (VCM) solution that enables enterprise recording, webcasting and portal solution to create and deliver higher quality, affordable videos. The new HARMAN Media Suite platform, powered by Vuforia, will offer the following groundbreaking capabilities:

- Converting video to virtual reality content – users will be able to fully immerse themselves into training and additional communication materials with the help of virtual reality.
- Annotating interaction beyond video terminals – pop-up annotations can be overlaid in combination with AR and VR conversion, providing a richer experience for the user.
- Visualizing through mobile apps and wearables – the user can take the content with them, allowing training and communications to go beyond the office.
- Creating highly contextual content through voice and chat – voice, text and location overlay mean one unique, cohesive experience.

"Augmented and virtual reality are quickly emerging as mediums to train and collaborate within enterprises," says Sandeep Kalra, SVP and GM of the Digital Transformation Solutions, HARMAN Connected Services. "We're thrilled to be expanding our collaboration with PTC to enhance our Media Suite solution with mixed reality and ultimately transform how people work. At HARMAN, we're committed to bringing the most innovative solutions to market. We're constantly striving to create and deliver these pioneering technologies to our customers, and through this continued integration with PTC solutions, we're able to do just that."

"PTC is excited to expand its relationship with HARMAN with the integration of Vuforia with HARMAN's solutions," says Catherine Kniker, Chief Revenue Officer, ThingWorx, PTC. "HARMAN and PTC are collaborating to build solutions that leverage the PTC ThingWorx Industrial Innovation Platform and tools for the enterprise. With our AR technology suite, we are excited to continue this collaboration with HARMAN to further innovation for the next generation of mixed reality content."

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FogHorn Collaborates with Wind River to Combine Breakthrough Edge Intelligence with Real-time Management of Industrial IoT Devices

26 February 2018

FogHorn Systems today announced integration with Wind River® products designed to advance Industrial IoT (IIoT).

The companies have teamed to integrate FogHorn's breakthrough Lightning™ edge analytics and

machine learning platform with Wind River's industry leading software, including Wind River Helix™ Device Cloud, Wind River Titanium Control, and Wind River Linux. This unique offering will accelerate the competitive imperative industrial organizations face to harness the power of their IIoT data. Specifically, FogHorn enables organizations to place data analytics and machine learning as close to the data source as possible; Wind River provides the technology to support manageability of edge devices across their lifecycle, virtualization for workload consolidation, and software portability via containerization.

"Wind River's collaboration with FogHorn will solve two big challenges in Industrial IoT today, getting analytics and machine learning close to the devices generating the data, and managing thousands to hundreds of thousands of endpoints across their product lifecycle," said Michael Krutz, Chief Product Officer at Wind River. "We're very excited about this integrated solution, and the significant value it will deliver to our joint customers globally."

FogHorn's Lightning product portfolio brings a groundbreaking dimension to the industrial IIoT by embedding edge intelligence directly into small-footprint IoT devices. The Foghorn platform is the world's most compact, advanced and feature-rich edge intelligence solution, delivering unprecedented low latency for onsite data processing, real-time analytics, machine learning and AI capabilities. By enabling data processing at or near the source of sensor data, FogHorn eliminates the need to send terabytes of data to the cloud for processing. Instead, FogHorn can process the data onsite, generate insights and publish only relevant data to the cloud for further analysis.

"Large organizations with complex, multi-site IoT deployments are faced with the challenge of not only pushing advanced analytics and machine learning close to the source of the data, but also the provisioning and maintenance of a high volume and variety of edge devices," said Kevin Duffy, VP of Business Development at FogHorn. "FogHorn and Wind River together deliver the industry's most comprehensive solution to addressing both sides of this complex IoT device equation."

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Mentor Embedded Linux platform supports new AMD EPYC Embedded and AMD Ryzen Embedded processors

21 February 2018

Mentor®, a Siemens business, announced Mentor Embedded Linux® (MEL) support for the latest AMD Embedded processor families, EPYC™ Embedded 3000 and Ryzen™ Embedded V1000, targeting industrial, medical, networking, storage, and edge computing devices. Based on the high-performance x86 "Zen" architecture, these two new AMD product portfolios represent a new age of embedded processors, providing superior performance and a suite of on-chip security features.

Mentor provides "out-of-the-box" embedded Linux support for hardware-accelerated applications, enabling the development of high-performance machine vision and machine learning applications with exceptional integration. This is achieved by enabling OpenCV vision libraries and TensorFlow™ libraries, with security enabled throughout the device. Mentor is the leading commercial embedded Linux supplier to support this capability. Visit the AMD Booth (Hall #1 - Booth 360) at Embedded World 2018 to see machine vision and machine learning demos running on Mentor Embedded Linux.

"Mentor Embedded Linux provides regular security updates and easy-to-use profiling tools, enabling our

clients to achieve shorter development cycles and smoother integrations of our smart cameras in their industrial-grade applications," stated Kristian Glöde Madsen, CEO of Qtechnology A/S in Denmark, a global manufacturer of Linux-based intelligent cameras and industrial vision systems.

The commercial version of MEL provides support for advanced graphics, multimedia and video applications, including popular packaging and development tools for creating gaming applications, such as Pachinko gaming systems. The MEL platform includes updated software development tools: GNU compiler collection (GCC), GNU project debugger (GBD), and Yocto™ Project 4.9 Long-Term Support (LTS) Linux kernel. Graphics components supported with this new commercial version of MEL include:

- LunarG™ software development kit (SDK)
- OpenGL®
- Vulkan® drivers – with Mentor being the first and only commercial embedded Linux supplier to support this technology
- AMD graphics processing unit (GPU)
- Video decode and presentation API for UNIX® (VDPAU)

Mentor's "out-of-the-box" support enables customers to get started faster, while leveraging the proven reliability of MEL. The highly-scalable EPYC Embedded 3000 series provides comprehensive security features, so customers can quickly develop Linux-based applications for applications such as networking servers and storage systems. AMD customers using Ryzen Embedded V1000 processors will experience powerful graphics on a single chip with space and power savings, ideal for medical imaging, industrial systems, and casino gaming applications.

"The new AMD EPYC Embedded 3000 and AMD Ryzen Embedded V1000 processors will change the game with unprecedented performance and exceptional integration," stated Scott Aylor, corporate vice president, Datacenter and Embedded Solutions Business Group, AMD. "AMD has a long-standing partnership with Mentor Embedded Linux, and we are pleased to continue empowering our joint customers in developing dynamic applications with greater reliability by offering advanced high-performance embedded technologies rooted in the transformative 'Zen' architecture."

Product Availability

Mentor Embedded Linux commercial licenses are available for purchase from the Mentor sales channel for "out-of-the-box" advanced multimedia and industrial vision application development. AMD customers can also download the free MEL Lite version. For additional product information, go to https://www.mentor.com/embedded-software/partners/amd.

Mentor embedded solutions enable embedded development for a variety of applications including automotive, industrial, smart energy, medical devices, and consumer electronics. Embedded developers can create systems with the latest processors and microcontrollers with commercially supported and customizable Linux-based solutions including the industry-leading Sourcery™ CodeBench and Mentor Embedded Linux products. For real-time systems, developers can take advantage of the small-foot-print and low-power-capable Nucleus® RTOS. For more information, visit www.mentor.com/embedded.

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PTC Cloud Receives Esteemed FedRAMP Certification

27 February 2018

PTC today announced that several of its offerings, available via PTC Cloud, have received an esteemed FedRAMP certification after a rigorous evaluation showed that PTC's security practices and controls meet the U.S. Federal Government's high security standards for cloud services. FedRAMP's authorization covers PTC's product lifecycle management (PLM) and service lifecycle management (SLM) solutions and leading ThingWorx® IoT platform, hosted within the PTC Cloud FedRAMP environment.

As more and more companies are adopting cloud-based hosting strategies, the complexity of cloud security becomes a growing concern. FedRAMP is an assessment and authorization process used by the U.S. Federal Government to ensure proper security is in place when accessing cloud computing products and services. Federal agencies must ensure that the cloud computing systems they use are FedRAMP certified before they can use them in production. PTC Cloud offerings have earned FedRAMP Moderate SaaS certification and also meet the DFARS security requirements and NIST SP 800-171 standards that defense contractors are required to meet. PTC is the only technology vendor that provides both PLM and SLM solution offerings, as well as an IoT platform, that are FedRAMP certified.

"Security is one of the biggest challenges for government organizations adopting a cloud strategy," said Brent Baker, vice president, Worldwide Federal Aerospace and Defense, PTC. "PTC prioritizes security and understands the role that security plays across the entire enterprise. The FedRAMP certification process is extensive, and we are proud that PTC Cloud has achieved this distinction."

PTC Cloud provides a comprehensive suite of offerings that allow users to create and collaborate in a secure and reliable manner; sharing critical information related to product development, operation, manufacturing, service, and support. With proactive monitoring and annual auditing, PTC Cloud SaaS provides the scalability, reliability, and security infrastructure companies leveraging cloud-based business applications need to protect their data assets. PTC's security posture is constantly evolving to meet the ever-changing threat landscape and utilizes a closed-loop process for continual improvement of security processes and procedures.

PTC has provided application hosting services to the Federal Government since 2002.

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Siemens addresses digital enterprise with Valor IoT Manufacturing Analytics and MindSphere

28 February 2018

Siemens today announced the Valor™ IoT Manufacturing Analytics product, a new comprehensive big data and business intelligence platform that monitors and manages global electronics manufacturing operations for accurate, real-time manufacturing utilization and overall equipment effectiveness (OEE). Building on the acquisition of Mentor Graphics, Siemens continues to invest in software solutions to realize innovation and power each customer's digital enterprise. This new solution is powered by MindSphere. By collecting and managing rich data sources from Valor shop-floor modules, the product provides visibility into all shop floor equipment, materials management, product quality, traceability, and supply-chain operations globally for optimum supply-chain performance.

This new product is an extension of the Valor Manufacturing Solution, a robust, scalable and secure plug-and-play IoT device and data acquisition product for electronics manufacturing. Only Siemens provides integrated software solutions across the entire customer value chain, from initial conceptual design through manufacturing planning and execution, to service and support of both the products and the plants that produce them.

"Our Valor plug-and-play IoT device and data acquisition tool for electronics manufacturing has evolved to today's new IoT Manufacturing Analytics solution, which aligns with Siemens' commitment to developing innovative technologies for factory automation," stated Dan Hoz, general manager of the Valor Division of Mentor, a Siemens business. "Our new technology will provide invaluable performance data and real-time visibility to shop-floor management so they can deliver high-quality, high-yield products as a key competitive advantage."

This open and scalable Valor solution captures and explores complete materials, quality and process traceability data for printed circuit boards (PCB) and assemblies, measuring and analyzing how resources are utilized with real-time work-in-progress tracking and optimum efficiency. It manages data from all manufacturing sites and production lines, including machine performance analysis and utilization. PCB manufacturing executives, line managers, and manufacturing engineers can now realize design-to-manufacturing efficiency for their customers' work orders by detecting factors that affect yield and identifying areas for improvements.

"Smart capture and utilization of technical data is essential for enabling analysis of manufacturing floor processes," reports Laurie Balch, Chief Analyst at Gary Smith EDA. "Manufacturing teams have found it incredibly challenging to obtain the critical data they need. Providing solutions to streamline and simplify that process, as with the Valor IoT Manufacturing Analytics solution, is crucial to improving their data analysis capabilities and empowering their decision making."

MindSphere, Siemens' open cloud-based Internet of Things (IoT) operating system provides the ability to develop robust industrial IoT solutions on a shorter timeline for customers across many industries. MindSphere delivers a wide range of device and enterprise application connectivity protocol options, industry applications, advanced analytics and an innovative development environment that utilizes both Siemens' open Platform-as-a-Service (PaaS) capabilities along with access to native cloud services. Valor IoT Manufacturing Analytics powered by MindSphere provides a holistic set of IoT solutions and services matching customer requirements, providing numerous opportunities to build and operate digital offerings.

The introduction of this new technology expands Siemens' offerings for the manufacturing digital enterprise. Siemens' expertise in digital manufacturing provides digital twins of the product and process as part of the planning phase, and then captures a digital twin of the equipment/performance as part of the execution phase. By acquiring EDA leader Mentor Graphics, Siemens will leverage Mentor's leading IC, PCB and software design tools with the growth in the digitization and automation of global manufacturing. In the same way Siemens brings digitalization to mechanical manufacturing, digitalization is available to electronics through an end-to-end solution covering the entire PCB design through manufacturing flow. The new Valor IoT Manufacturing Analytics solution is the next step in the future vision for Siemens' digital enterprise for electronic engineering, with a goal to enable a seamless connection between the electronic and mechanical flows, with real-time updates between each discipline.

"We look forward to a clear vision of one integrated solution for the entire manufacturing process and production system," said Zvi Feuer, senior vice president of Manufacturing Engineering Software for

Siemens PLM Software. "By closing the loop between manufacturing and design, customers will be able to use advanced analytics to help turn vast amounts of data into clear and useful insights, enabling key improvements in the areas of preventative maintenance and inventory turnover optimization. This latest product from the Valor team takes us one step closer to our future vision."

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VMware Extends Internet of Things Strategy with New Edge Computing Solutions

28 February 2018

Today at Mobile World Congress 2018, VMware, Inc. unveiled the next chapter of its Internet of Things (IoT) strategy which will focus on delivering new edge computing solutions for specific use cases including Asset Management and Smart Surveillance. These edge solutions will feature VMware vSAN hyper-converged infrastructure (HCI) software, VMware vSphere and VMware Pulse IoT Center, and will be developed in collaboration with industry-leading partners including Axis Communications and Wipro Limited, among others.

VMware sees unique requirements and environments at the edge and will address them through use case specific solutions spanning:

- **Industrial remote** IoT use cases such as oil well optimization, utility grids, and smart city use cases where the things reside in ruggedized, disparate, outdoor and often times, remote locations with inconsistent network and power;
- **Factory and plants** in support of closed networks, ruggedized indoor environments; and,
- **Branches and in-stores** in support of unique space and power requirements and coordinated across many stores.

IoT introduces a new wrinkle in today's centralized data center/cloud model. A new class of cost-effective edge infrastructure is required to process data inputs from millions or even billions of IoT endpoints that are separated from the core data center or the public cloud by bandwidth. This new infrastructure must be simple to manage as there are no IT specialists at the edge; cost-effective as the volume of edge installations is large; and, scalable to allow edge installations to grow over time.

"By 2022, as a result of digital business projects, 75% of enterprise-generated data will be created and processed outside the traditional, centralized data center or cloud, which is an increase from less than today's 10%," according to Gartner. (1) Local analytics offer faster response times, reduced storage costs, and an optimum use of bandwidth while also supporting data privacy and compliance requirements.

VMware to Deliver HCI Solutions for the Edge

HCI and VMware Pulse IoT Center are ideally suited to process and secure sensor data that bridges the physical and digital worlds. VMware is working on providing more efficient and more secure IoT infrastructure that is easy to manage, scale, and update so customers can accelerate IoT initiatives and realize ROI faster. Based on the leading hyper-converged solution, these edge solutions will feature real-time analytics in support of IoT initiatives where customers will have the choice of licensing third-party business analytics starter kits, in partnership with industry leaders, to help with content analytics and drive business decisions.

VMware offers a full ecosystem of server hardware for Edge infrastructure or gateway solutions depending on use case needs, environment, and desired rugged ability. These new solutions include VMware Pulse IoT Center for management, monitoring, and security of all edge systems/gateways and connected devices such as sensors and the appropriate management and security solution to support compute and storage infrastructure and applications across the edge.

VMware to Collaborate with Axis Communications and Dell EMC for Smart Surveillance Solution

VMware and Axis Communications are collaborating on an IoT solution for the surveillance industry. The solution will feature Axis Communications' state of the art surveillance capabilities including IP cameras as well as 4G/LTE routers which can be deployed to protect properties, stores, and employees. With VMware Pulse IoT Center, customers will have a way to manage, monitor, and secure their Axis Communications cameras and routers. Initially, the solution will be available on a choice of Dell EMC servers and include the option of Dell Edge Gateways. Additionally, VMware is working with financial services organizations to develop the modern bank of the future using surveillance to optimize security and the customer experience.

VMware, Dell Technologies and Wipro Limited Team Up on IoT Solution for Manufacturers and Asset Management Services

VMware and Wipro Limited, a leading global information technology, consulting and business process services company, are working together to offer manufacturers a complete edge to cloud IoT solution. The benefits of improved efficiency and productivity of machinery and other assets across the shop floor have the potential to contribute significant returns to manufacturers. Featuring Wipro's IoT offerings, including its Looking Glass asset management platform and services capability, the solution will integrate multiple IoT platforms which are either hosted on-premises or in the cloud. By connecting their IoT environment to their data centers, customers will benefit from deeper analytics and machine learning. Wipro will also be one of the first system integrators to provide installation and management services for VMware's IoT Edge solutions.

Manufacturers can use Wipro's IoT Platform and analytics capabilities for real-time data processing and for predictive failure analytics for devices and equipment on the manufacturing floor. VMware Pulse IoT Center helps manage, monitor, and secure assets and data in facilities as well as the edge infrastructure. By combining Wipro's complete IoT Platform and analytics capabilities with VMware's Pulse IoT Center, customers have access to a complete and seamless solution.

VMware Supports Edge Computing Research

VMware, in conjunction with the National Science Foundation (NSF), has announced a new solicitation on Edge Computing Data Infrastructure for research that advances the state of the art in end-to-end networked systems architecture that includes edge infrastructures. VMware will fund two awards valued at a total of $6 million for U.S. university faculty members. Additional information is available here.

Supporting Quotes

"Building an edge computing solution today is a time-intensive exercise most enterprises can't afford. Today, VMware unveils hyper-converged edge computing solutions that are cost-effective and will enable customers to build and scale secure, use case-specific IoT solutions that work for them from the edge all the way to the cloud, relying on proven, tested software they already use and trust. Together with ecosystem partners Axis, Wipro Limited and Dell EMC, we're excited to deliver the first of many tailored solutions to meet the unique IoT needs of our enterprise customers," said Ray O'Farrell, executive vice president & chief technology officer, VMware.

"With the convergence of IT and security top of mind for the industry, we're excited to collaborate with VMware on an IoT solution for the surveillance industry," said Scott Dunn, senior director, Business Development Solutions & Services, Axis Communications, Inc. "This collaboration will give us an outstanding opportunity to deliver a better experience for our mutual customers by providing a leading edge IoT platform and management solution."

"Our partnership with VMware and Dell Technologies complements our end-to-end IoT solutions and enables us to realize business outcomes for our customers," said Jayraj Nair, vice president and global head of IoT, Wipro Limited. "Asset management, smart manufacturing, logistics and supply chain solutions enabled by IoT technologies are ushering in new levels of operational efficiency for our global clients."

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