

PLM Industry Summary

Sara Vos, Editor

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CIMdata News

CIMdata to Host Free Webinar on Product Lifecycle Management for After-Sales

19 March 2019

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces an upcoming free educational webinar, "The As-Maintained BOM: Managing the Product Lifecycle After the Sale." The webinar will take place on Thursday, April 11, 2019, at 11:00 a.m. (EDT) and will last for one hour.

Many of CIMdata's industrial consulting clients have aspirations of improving profitability by capturing after-sales revenue including service, repairs, and upgrades. While a few companies are known for effective service and support operations, most only have a notion or aspiration about how to capture much of the potential opportunity, even when they have a functioning service organization.

To meet the vision of improved revenue from service operations a lifecycle configuration strategy that leads to configuration-controlled after-sales BOMs must be put into place. Key processes need to be introduced, the organization needs to be aligned with the vision, processes, and the technology used to manage product definition, especially the configurations of the service BOM (sBOM) and as-maintained BOM. Once these foundational architectural elements are in place, then a continuous improvement process that focuses on lifecycle optimization can be used to harvest short- and long-term benefits.

BOM configuration management over the product lifecycle is a foundational capability. The state-ofthe-art solutions being implemented today include digital twin and digital thread support. Physical product instances are connected to the appropriate product structures including the as-designed, asmanufactured, and as-maintained configurations, as well as sBOM to create a digital twin that is enabled and maintained by the digital thread.

This webinar will identify common issues across the lifecycle that must be addressed in order to achieve

configuration control of BOMs across the lifecycle and will also describe how a properly implemented PLM solution can address the issues and support the digital thread to enable a digital twin strategy thus, improving a company's top and bottom line.

This webinar will help attendees:

Better understand how PLM can be used to support service and after-sales operations.

Understand why product configuration across the lifecycle is critical.

Understand why getting the as-designed, as-manufactured, and as-maintained BOMs under configuration control with a single enterprise change management process is critical to improving profitability and fewer customer complaints.

Understand how PLM can help improve service and spare part inventory management.

According to Tom Gill, CIMdata's Practice Manager for PLM Enterprise Value & Integration, and the host for this webinar, "Capturing service and spare part revenue is a common way for capital and durable goods producers to generate additional revenue and improve profitability. Ensuring that spare parts are available, and downtime minimized are also good strategies to improve customer satisfaction. While the vision is straightforward, effective execution has many moving parts that need a proper strategy and solution architecture to function effectively. CIMdata is observing that service leaders are extending their PLM solutions to enable digital thread capabilities that support digital twins of fielded products allowing the creation of additional value-added services such as predictive maintenance."

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

This webinar will be useful to a wide audience including executives, directors, and managers responsible for product development, realization, and aftersales, business owners and executives, product and service planners and managers, product and service portfolio managers, PLM team leaders, PLM team members, product managers, IT leadership, solution providers, and anyone else who wants to learn about how PLM can improve after-sales and service operations.

During the webinar attendees will have the opportunity to ask questions about the topics discussed. To find out more, visit: <u>https://www.cimdata.com/en/education/educational-webinars/webinar-plm-for-after-sales</u>. To register for this webinar please visit: https://register.gotowebinar.com/register/6963810064536284161

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 <u>www.CIMdata.com</u>, follow us on Twitter: <u>http://twitter.com/CIMdataPLMNews</u>, 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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Acquisitions

Atlassian acquires AgileCraft to scale agile to the enterprise

18 March 2019

Announced on the Atlassian blog:

"We're excited to share we've entered into an agreement to acquire AgileCraft, a leader in enabling scaled agile transformations. Many Atlassian customers, including AT&T, Anthem, NCR, TIAA, and Duke Energy trust AgileCraft to scale their teams' agile practices.

AgileCraft: Scaling agile to drive outcomes in the digital enterprise

AgileCraft brings together the teamwork happening across an organization into an all-encompassing view that connects strategy, work, and outcomes. And because large-scale technology initiatives are increasingly complex, this visibility, context, and alignment are essential.

AgileCraft navigates this complexity and helps organizations to scale agile by unifying and synchronizing the work happening across programs and portfolios for a clear executive-level view. At the same time, agile teams can continue to use their preferred tools, like Jira and Trello, to move quickly and deliver the best customer outcomes. AgileCraft also supports another key variable in the scaled agile equation—proven frameworks that can be customized to meet each organization's needs. AgileCraft supports SAFe, LeSS, Spotify, and a number of other scaled agile frameworks.

The rich information summarized in AgileCraft provides teams with greater situational awareness, including strategic context that helps everyone understand shifts in priorities in real time. With AgileCraft, leaders can examine their entire business to assess where they should be making strategic bets, like adding 10% more funding to a mobile project that's showing strong initial results, or dialing back on an integration initiative that's not generating the forecasted customer value.

Unlocking the potential of teams at enterprise scale

Thousands of customers have trusted Atlassian to provide the tools and practices to transform software development and embrace agile in all of its forms. Adding AgileCraft to our existing family of agile products increases the breadth and depth of agile teams we can support. We're committed to supporting you at each stage on your agile journey; whether it's a single team using Jira Software to get aligned and track progress; Portfolio for Jira for cross-project visibility; or AgileCraft to help connect company

strategy to customer outcomes. Together, Atlassian and AgileCraft provide a unified solution for teamlevel and enterprise-level agile, with tools that are beloved by development teams and able to scale to meet the diverse needs of enterprise organizations.

On behalf of all Atlassians and our customers, we're thrilled to welcome the AgileCraft team to Atlassian. We will continue to offer AgileCraft as a standalone service as we work together to build solutions that can unlock the potential of teams at scale.

To learn more about AgileCraft and Atlassian's plans for Agile at Scale, don't miss out on Atlassian Summit in Las Vegas! We'll see you there."

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OMAX plans to join forces with Hypertherm, strengthening its waterjet industry leadership position

20 March 2019

OMAX Corporation, a manufacturer of abrasive waterjet systems, plans to join forces with Hypertherm, a U.S. based manufacturer of industrial cutting systems and software, following the signing of a definitive merger agreement that establishes OMAX as a wholly-owned subsidiary of Hypertherm. Upon the closing of the transaction, expected on or around April 9, OMAX's industry leading direct drive pumps, software, and applications technologies will combine with Hypertherm's complementary portfolio of intensifier-based pumps and abrasive recycling systems, to form the industry's leading waterjet technology offering.

"When the late Dr. Olsen and I founded OMAX 25 years ago, our goal was to combine new motion control technology with software to create an abrasive waterjet system unlike anything else on the market. We more than succeeded, creating one of the world's top waterjet manufacturers," said John Cheung, co-founder and CEO of OMAX. "Together, we have been planning for the future of OMAX for some time. In planning for this future, we wanted to partner with a company that shared our values and vision. We wanted a company that would protect our culture, provide stability for our employees, and give our customers products and services consistent with our mission statement. Though Dr. Olsen is sadly not here for today's announcement, I am comforted knowing he completely supported and wanted this for OMAX."

"Hypertherm is excited to welcome OMAX to our family and to bring together the leading waterjet R&D and engineering team in the world with our hardworking and talented waterjet team in Minnesota," said Hypertherm president and CEO Evan Smith. "We are confident the combination of OMAX's cutting-edge technology and solutions, innovation focus, strong brand name, commitment to customers, and excellent culture is a perfect complement to Hypertherm's waterjet offerings and plasma cutting industry leadership position. It enhances our strategy of delivering cutting solutions that put customer needs first."

Hypertherm does not plan to make significant changes to OMAX's operations, management structure, or distribution channels. The company's current offices and manufacturing operations in Kent, Washington, where the majority of its 367 associates are located, will remain intact, with no consolidations or reductions planned, in keeping with Hypertherm's no-layoff philosophy. Hypertherm also anticipates continuing both the Hypertherm and OMAX waterjet product offerings and brands, as the companies' technologies and business models balance each other.

Based in Kent, Washington, OMAX Corporation is a global leader in advanced abrasive waterjet systems that cut virtually any material and thickness with unmatched speed and accuracy. Owner of the OMAX, MAXIEM, GlobalMAX, and ProtoMAX brands, the company provides a comprehensive selection of JetMachining Centers that feature intuitive software controls and incorporate the most efficient pump technology available. In developing its machines, the company designs, manufactures, assembles and tests components as a complete system to ensure optimum performance. The company also has the most comprehensive service and support network in the waterjet industry to keep its customers ahead of the manufacturing curve. For more information, visit OMAX.com.

Hypertherm designs and manufactures industrial cutting products for use in a variety of industries such as shipbuilding, manufacturing, and automotive repair. Its product line includes cutting systems, in addition to CNC motion and height controls, CAM nesting software, robotic software and consumables. Hypertherm systems are trusted for performance and reliability that result in increased productivity and profitability for hundreds of thousands of businesses. The company's reputation for cutting innovation dates back 50 years to 1968, with Hypertherm's invention of water injection plasma cutting. The 100 percent associate owned company has more than 1,400 associates along with operations and partner representation worldwide.

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Siemens extends industry leading Simcenter simulation and test offering with acquisition of noise, vibration and harshness business from Saab Medav

22 March 2019

Siemens announced today that it has signed an agreement to acquire the Noise, Vibration, and Harshness (NVH) end-of-line quality testing business of Saab Medav Technologies GmbH, a global provider of state-of-the-art signal processing, communications intelligence and analysis for air, land and naval applications, as well as NVH solutions for industrial quality testing.

The unique NVH quality testing solutions offered by Saab Medav have a strong track record and have established innovative best practices in the domain of end-of-line quality testing of combustion engines, transmissions, electric motors and motor driven components and systems. The addition of Saab Medav NVH allows Siemens to complement its SimcenterTM portfolio of testing solutions used in research and development with an integrated solution set for end-of-line NVH quality testing in manufacturing. The technology and team will join the Siemens PLM Software business, part of the Siemens Digital Factory Division, and will be incorporated into the Simcenter portfolio of simulation and testing solutions.

With ever-increasing pressure on improving quality, the need for NVH type end-of-line testing for manufactured products such as electric motors, combustion engines, transmissions, axles, and turbo chargers is rapidly increasing across the automotive and transportation industries. This phenomenon is accelerated with the ascent of electric vehicles which have a low general noise level and are lacking the masking effect from a loud combustion engine.

"With the integration of Saab Medav NVH quality testing solutions, Siemens customers can gain the ability to enrich the digital twin of their product design with continuous quality control information from manufacturing. This provides unique insight in how production technology and variability in manufacturing lines influence the final product quality," explains Jan Leuridan, Senior Vice President, Simulation & Test Solutions, Siemens PLM Software. "The technology also gives direct feedback on the

root cause analysis of possible design issues that appear in manufacturing and generates insight for possible intermediate redesigns. Creating a constant data feedback loop from manufacturing into product design and engineering also supports closing the loop on optimized requirements for future generation product designs."

"Siemens is one of the market and technology leaders when it comes to NVH test-based engineering and simulation. The combination of the Siemens test-based engineering technologies with the end-of-line technology of Saab Medav will provide a strong basis for future innovation in both application areas," said Olaf Strama, Head of NVH department at Saab Medav. "We believe that as part of Siemens, our customers will benefit from an industry-leading development team of NVH testing technology and solutions, including an extensive portfolio of systems and software for data acquisition and smart data analytics. The global reach of Siemens can serve our customers in all key manufacturing areas worldwide, which will help us to strengthen our overall market position."

The asset sale and purchase transaction is due for completion in the second calendar quarter of 2019. The parties have agreed not to disclose any details of the transaction.

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Company News

AVL and MSC Software to Collaborate on Autonomous Vehicle Projects

19 March 2019

MSC Software, a Hexagon company, and AVL List GmbH in Austria announced today a collaborative partnership for research, development and customer projects in the field of simulation and testing of Autonomous Driving (AD) and Advanced Driver Assistance Systems (ADAS) systems. This is a consequence of a common agreement across the automotive industry that validation of SAE Level 4 and 5 (highly automated) vehicle systems based on miles driven is neither feasible nor economical. Moreover, testing on public roads has severe limitations and hazards. A comprehensive scenario-based development and validation methodology is therefore needed to ensure safety in the entire operational design domain.

As the leading test system provider, AVL is developing a scenario-based open verification and validation toolchain to generate operational scenarios, create the relevant test cases, and execute testing and homologation of automated driving functions in combined virtual and real road environments based on an open and integrated tool environment.

Hexagon's VIRES VTD (Virtual Test Drive) is a tool-suite for the creation, configuration, presentation and evaluation of virtual environments in the scope of road and rail based ADAS/AD simulations. It covers a full range from the generation of 3D content to the simulation of complex traffic scenarios and, finally, to the simulation of either simplified or physically driven sensors. Due to its open and modular nature, VTD can easily be interfaced and integrated into other AD applications.

"AVL and MSC have discussed their respective technological and industry backgrounds and have come to the conclusion that a collaboration will create additional value to our customers in the field of testing and validation of automated driving, driver assistance, and active safety systems," said Kai Voigt, EVP of AVL Instrumentation, Software and Technology. "AVL's tool chain strategy is based on an open and

integrated tool environment. This approach allows the integration of different tools and content such as VIRES VTD and Adams from MSC, an important aspect of the virtual and real validation of autonomous vehicles".

Commenting on this partnership, Paolo Guglielmini, CEO of MSC Software said: "VIRES has worked with AVL in EU projects such as Enable-S3 for many years now, as well as together with us at MSC on joint projects at European OEMs. As part of this ongoing collaboration, AVL's toolchains will interface with VIRES VTD and MSC's Adams product lines, and our toolchains will interface with AVL's Model.CONNECT product. We believe this gives customers access to some of the best-in-class autonomous simulation and testing technologies available in the world."

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BlackRidge Technology Joins the PTC Partner Network to Enhance Industrial IoT Security for Connected Enterprises

18 March 2019

BlackRidge Technology International Inc. announced that it has joined the PTC Partner Network. BlackRidge secures IT and OT networks to Industrial Internet of Things (IIoT) devices via patented First Packet Authentication[™] technology, which authenticates identity and enforces security policy on the first packet of a network session. BlackRidge addresses the potential vulnerabilities of connected enterprises at a fundamental level, by stopping cyberattacks before they begin, while providing network microsegmentation and segregation for IT and OT convergence.

PTC's ThingWorx® IIoT platform

BlackRidge's identity-based cybersecurity solution, TAC Identity Device, is ready out-of-the-box to be integrated with PTC's ThingWorx® IIoT platform and is immediately available on the PTC Marketplace. TAC Identity Device can be designed into third-party solutions to secure the IIoT-connected ecosystem, thereby offering solution builders enhanced security to further enable digital transformation.

"We're pleased to welcome BlackRidge Technology to the PTC Partner Network," said John Gray, senior vice president, Global Solution Provider Sales, PTC. "Our carefully-selected network of partners allows us to leverage market expertise and deliver the level of product and service quality synonymous with the PTC brand."

"BlackRidge's identity-based approach to securing the connectivity of IIoT devices supports PTC's mission of driving industrial innovation and accelerating digital transformation," said Michael Murray, senior vice president and general manager of cyber physical systems at BlackRidge. "Authenticating identity at the edge node enables greater trust, security and micro-segmentation of networks, including legacy environments."

Operating at the network transport layer, BlackRidge products including the TAC Identity Device can be integrated into legacy, virtual and cloud environments to bridge gaps between brownfield OT infrastructure and latest-generation IT systems.

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Dassault Systemes and IPACS Sign MoU to Create Industrial IoT Demonstrator for Key Industries in Australia

21 March 2019

Dassault Systemes and IPACS, an Australian technology company specializing in the collection, monitoring and reporting of real-time asset performance in various industries, signed a Memorandum of Understanding ("MoU") to jointly pursue technical and business opportunities in key industries in Australia, namely natural resources, defence, marine and offshore, cities and territories.

Dassault Systemes and IPACS went through a value assessment during a pre-qualification phase for the South Australian Government's marine and defence industry supply chain program, the "Virtual Shipyard", to develop a strong domestic defence industry that will support the Federal Government's Future Submarines and Future Frigates programs set to commence in 2020.

In the course of the assessment, Dassault Systemes and IPACS identified each other as partners with strong and desired skills for technical and business collaboration as they explore opportunities in natural resources, defence and other key industries in Australia. Under the terms of the agreement, Dassault Systemes will collaborate with IPACS to create a first-of-a-kind industrial demonstrator in Internet of Things ("IoT") for joint exploration of these business opportunities, which will leverage IPACS' IoT sensing technology and Dassault Systemes' software solutions on the 3DEXPERIENCE platform.

"IPACS currently operates South Australia's pioneering Remote Operation Centre for the state's resources industry," said Kailash Nath Sriram, Managing Director and CEO of IPACS. "This new industrial IoT demonstrator will be a fantastic platform for IPACS in expanding our expertise to service other major industries. We look forward to working with Dassault Systemes to explore new opportunities in natural resources, defence and other key industries in the state."

The collaboration also further extends Dassault Systemes' ongoing successful partnerships with local companies in Australia for industry capability development and expansion, notably the "Virtual Shipyard" program in South Australia to help the state's enterprises build their digitalization capabilities for future defence projects and global supply chains.

Said Masaki Sox Konno, Managing Director, Asia Pacific South, Dassault Systemes. "As a technology partner to IPACS, already an established player in South Australia's resources sector, Dassault Systemes brings its global expertise and best practices in industrial processes and digitalization solutions to the collaboration. We look forward to working together with IPACS to jointly expand our technological capabilities to serve the natural resources sector, defence and our other key industries in Australia."

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Deadline Announced to Submit Presentation Abstracts for the COMSOL Conference 2019

18 March 2019

COMSOL has announced that the Program Committee for the COMSOL Conference 2019 has begun to accept abstract submissions for posters and papers.

Presenters at the COMSOL Conference gain exposure to a worldwide audience, providing them with the opportunity to showcase their work to simulation specialists throughout industry and academia.

"Presenting at the COMSOL Conference is a great opportunity to share our modeling and simulation work with like-minded individuals and gain recognition for our contribution within the simulation community," said Fritz Lange, Research Associate, Fraunhofer. "Likewise, we learn about many different applications from other engineers and take that inspiration back home to improve on our work directly."

The papers and posters accepted for presentation will reach approximately 2000 conference attendees across the globe. Additionally, the conference proceedings are then published online for public access, amplifying the reach beyond those directly in attendance.

The COMSOL Conference 2019 Boston will be held October 2–4, 2019, at the Boston Marriott Newton hotel. For a list of worldwide events and deadlines, visit: <u>www.comsol.com/conference/boston</u>.

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EnginSoft USA Joins PTC Partner Network for Creo and Creo Simulation Live

18 March 2019

EnginSoft USA announced its joining of the PTC Partner Network as a distributor and service provider for PTC's Creo® design product, specializing in Creo Simulation Live.

EnginSoft USA provides clients with customized solutions for complex simulations. Founded in 1984, they are part of an Italian-based multinational simulation company that has worked with organizations across a broad range of industries, including automotive, aerospace, defense, energy, civil engineering, consumer goods and biomechanics. Over the past 30 years, the company has helped its clients maximize the potential of over 3,000 engineering simulation projects using industry-leading technology.

"PTC's Creo Simulation Live is real-time simulation functionality powered by ANSYS Discovery Live technology, which is deeply integrated into the design workflows in Creo. With Creo Simulation Live, Creo users get instant insight into the impact of their design decisions as they make them. This breakthrough technology will help deliver on the promise of simulation-driven design," said Brian Thompson, senior vice president, CAD Segment, PTC. "The executives at EnginSoft USA, Chris Wilkes and Dr. Andreas Vlahinos, have been working with PTC for many years and have built excellent reputations in the CAE industry. I am delighted that EnginSoft USA will be bringing the value of Creo with Creo Simulation Live to their customers."

"We are proud to partner with PTC to deliver Creo and Creo Simulation Live," says Chris Wilkes, CEO, EnginSoft USA. "Companies in all industries are seeing the need for rapid simulation to narrow the design space. Creo Simulation Live will be an important part of the process for all Creo customers who need real-time simulation for a shortened time to market. More simulations can result in higher quality parts that are much more likely to meet customer requirements."

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Intellectsoft Partner Adero is Ranked Among World's Most Innovative Companies

22 March 2019

Intellectsoft announced that its solutions helped Adero earn a place on Fast Company's list of "Most Innovative Companies 2019." Adero has taken the top 10 spot in the Consumer Electronics category alongside Apple, Google, Microsoft, and Dell.

For more than a year now Intellectsoft has been a trusted development partner for Adero's first product, the intelligent organization system. Positioned at the intersection of consumer electronics, hardware, the internet of things (IoT), mobile, software, and wireless, Adero offers customers a simple but smart solution for organizing belongings of different sizes. The system consists of small tracking devices, parent trackers, and a custom mobile app. Users place the parent beacon (called a Smart Tag) on a bag, the smaller trackers (called Taglets) on the belongings they usually put in that bag, and then register the bag and its tags in the mobile app. When a user leaves something from the bag behind, the app sends a notification after communicating with trackers. The bags, trackers, and notifications can be organized by the user in the app.

A solution to the ever-present problem of the busy modern lifestyle, Adero's product was challenging to bring to life successfully. Adero got in touch with Intellectsoft to tap into the company's wide-ranging expertise in Mobile, IoT, and Cloud and make their innovative idea a reality. Closely working with the Adero team on- and off-site in Santa Barbara, CA, Intellectsoft brought its extensive expertise and technical standards in iOS and Android apps MVP architecture, AWS, and microservices management. Intellectsoft's IoT engineers have created a mobile solution and established fail-safe communication between the app, the parent trackers, and the smaller tracking devices, ensuring a successful release of Adero's product to the public. Shortly after launching, Adero made it to Fast Company's list of the world's leading innovation companies.

Michael Minkevich, CEO of Intellectsoft, commented: "Innovative products and devices excite us and make our lives easier and better. Under the hood, truly innovative solutions also demand a lot of hard work, serious technical skills, dedication, creativity and much more — not only to bring to life, but also to consistently and successfully deliver on their promise. As Adero's premier engineering partner, we are honored to have had the opportunity to bring all these necessary skills to the company's product and help Adero receive such high praise from both the top tech media and the consumers. Intellectsoft is always focused on helping emerging leaders like Adero get a solid foothold in the competitive tech world by making their innovative efforts materialise, tick all the necessary boxes, and exceed expectations."

"Smart devices were supposed to make our lives better but we've discovered over the past decade that connecting anything and everything possible to the Internet is adding to our burden instead of alleviating it," said Adero's Chief Executive Officer Nate Kelly. "More apps to manage, more devices to keep an eye on, more cords to untangle—it's too much. Adero is giving your essentials awareness and intelligence to keep track of themselves so you don't have to. We're transferring the anxiety from you to our system of tags, effectively telling them to "take care of this bag" and "take care of the essentials in this bag," freeing your mind to focus on what matters most. Without Intellectsoft's expertise, getting this product to market would have been nearly impossible."

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Lantek names Unai Asla as new Chief Financial Officer

18 March 2019

Lantek announces the appointment and incorporation of Unai Asla Vicente as the new Chief Financial Officer of the company and member of the steering committee led by Alberto López de Biñaspre, CEO of Lantek.

This new incorporation is part of the organization's corporate strategy and derives from the initiatives proposed in the Lantek 4.0 program to consolidate itself as leader in the market and underpin its firm commitment to the digital transformation of the sheet metal industry.

Holder of a bachelor's degree in Business Administration and Management from the University of Deusto, Asla has over 16 years of experience in multinational industrial companies in management positions in business and finance areas, with a clear focus on the commercial area and, vast knowledge of the client's requirements as well as internationalization and business management.

Unai Asla began his professional career as financial audit and risk manager at PwC. Four years later, he joined the financial department of Fagor Industrial, where he directed the development of the internal audit control process. This experience enabled him to be appointed Managing Director of its offices in the United Kingdom, where he carried out important strategic work on the analysis of the business unit, obtaining not only a strategic vision but also a financial and commercial vision for the company. Eight years ago, he returned to Spain to join Onnera Group as the Corporate Credit Manager, later becoming the Corporate Finance Officer at the head of a leading international group with a turnover of 257 million euros, a workforce made up of over 2,100 employees, 8 manufacturing sites, 23 business delegations and over 15,000 active clients worldwide.

From now on, Unai Asla will be the Chief Financial Officer at Lantek and will join a dynamic leadership team experienced in industrial multinational environments, bringing new perspectives to the continued development the growth strategy of the business, the improvement of operational excellence and the shaping of the corporate culture to enable Lantek to continue leading the Digital Transformation of its industry.

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Minerva expands global operations to the DACH region

21 March 2019

Minerva Group, partner for Aras Innovator Enterprise Product Life Cycle Management (PLM) software, announced expanded operations in Germany.

Minerva is experiencing a massive increase in the demand for their Medical Device PLM solution on the German market. With growing teams and dedicated offices in Hamburg and Munich, this expansion is a response to support the growing demand from medical device companies such as Dräger Medical, Haselmeier and Weibel CDS.

Medical Device PLM is a dedicated PLM solution for medical device companies from Minerva built on top of the Aras Innovator PLM solution. Medical Device PLM offers industry-specific functionalities for medical device companies on a subscription model with no complicated PLM licenses.

Leading companies throughout the world, including Fujifilm, Carestream, Teledyne and Bausch & Lomb rely on Minerva Medical Device PLM to improve time to market, reduce costs and maximize profitability.

"With Medical Device PLM, we provide our customers with a solution that drastically improves the way they manage their product data and the traceability between data and process. With Medical Device PLM, our customers get a solution that out of the box supports automatic creation of DHF/DMR, automatic baselining of data, Risk Management, Traceability Matrix, just to mention a few key areas," says Thomas Skogen, Product Director at Minerva Group.

"The demand for digitalising the Medical Device companies complex processes has been very strong in Europe, especially in the DACH region wherefor we are pleased to increase our investment in the region. Medical device companies throughout the region, recognize the domain knowledge and value of the Minerva Medical Device platform and the business model. Our customers are able to significantly reduce the risk and cost of optimising the processes while enjoying industry-specific features and a competent partnership with their provider," says Asger Thierry, founder and CEO of Minerva Group.

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Omnichain CEO Earns Award Recognitions from Food Logistics and Supply & Demand Chain Executive

18 March 2019

Omnichain Solutions (Omnichain), an enterprise focused on supply chain management solutions powered by Blockchain, announces founder and CEO Pratik Soni has been named to both the Supply & Demand Chain Executive Pros to Know and Food Logistics Champions: Rock Stars of the Supply Chain lists for 2019. Presented annually, these awards recognize leaders that are transforming productivity and efficiency within the global supply chain.

Soni was commended for his work in promoting distributed ledger technology in the supply chain industry and launching Omnichain as a company in 2018. Omnichain offers a first-of-its kind platform that uses Blockchain to help brands and retailers connect their disparate supply chains, enabling complete transparency from source to shelf. With real-time data flow, intelligent algorithms and analytics, its Blockchain-as-a-Service (BaaS) platform helps companies to overcome challenges in product lifecycle management and channel inventory with proactive demand planning and forecasting.

Pratik Soni, co-founder and CEO, Omnichain, said, "I am honored to be recognized by both Food Logistics and Supply & Demand Chain Executive. At Omnichain, we are dedicated to breaking down the operational silos that have hindered the supply chain industry at large. We strive to unite fragmented supply chains, creating more efficient, holistic businesses able to proactively meet demand and drive profitability."

"Our 2019 Food Logistics Champions: Rock Stars of the Supply Chain reflects the expanding diversity that is emerging in our industry, both in terms of demographics and talent," remarked Lara L. Sowinski. "The combination of experience and wisdom complemented with a new generation of professionals is resulting in a food and beverage supply chain that is in sync with consumers' demands while

simultaneously adept and staying ahead of the logistical requirements."

"Supply & Demand Chain Executive congratulates the 2019 Supply & Demand Chain Executive Pros to Know recipients. Every year we receive more submissions from outstanding supply chain leaders. It's evidence of the growth in the supply chain profession as well as the importance of the profession within companies," said John Yuva, editor of Supply & Demand Chain Executive. "We commend this year's recipients for their achievements in supply chain and for paving the way for the next generation of exceptional supply chain leaders. This year's recipients embody the commitment to transformative supply chain tools and processes, earning these individuals a rightful place in this year's Pros to Know listing."

Recipients of this year's 2019 Food Logistics Champions: Rock Stars of the Supply Chain award will be profiled in the March 2019 issue of Food Logistics, as well as online at www.foodlogistics.com. For the full list of Pros to Know, visit Supply & Demand Chain Executive's website at www.sdcexec.com. The winners will also appear in the March 2019 print issue of the magazine.

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Panasas Announces the Winners of Its 2018 Accelerate Partner of the Year Awards

19 March 2019

Panasas announced the winners of its 2018 Panasas Accelerate Partner of the Year awards. The annual awards recognize leading resellers of the ActiveStor scale-out network-attached storage (NAS) solution for their exceptional contributions to winning new business, for their year-over-year growth and for expanding Panasas' global customer base in key industry verticals.

"Our partners around the world play an essential role in delivering the Panasas customer experience, and it gives me great pleasure to recognize their accomplishments," said Philip Crocker, senior director of global channel marketing and business development at Panasas. "2019 promises to be a groundbreaking year with the introduction of ActiveStor ® Ultra featuring PanFS ® 8, a completely reengineered portable file system that runs on industry-standard hardware. I'm looking forward to working with our partners as we expand our global customer base and seize the new market opportunities addressed by this highly competitive product."

The ease of use of PanFS, combined with the performance and cost efficiency of ActiveStor, create a very attractive value proposition for both commercial and traditional HPC applications. Designed for extreme performance and scalability configurations, ActiveStor Ultra is ideally suited for applications that require the processing of large and complex data sets with high precision, such as climate modeling, computer-aided engineering (CAE) simulation and analysis, energy exploration and precision medicine, as well as for emerging workloads such as AI and autonomous driving. PanFS 8, the intelligent parallel file system, can run on any properly configured and qualified commodity storage hardware, allowing for rapid adoption of new hardware capabilities and an expanded portfolio of hardware options.

This year's winners include:

ASRC Federal_ Panasas Accelerate Managed Service Provider of the Year 2018

General Microsystems Inc._ Panasas Accelerate Americas Manufacturing Partner of the Year 2018

"Consistency is an important attribute for successful partnerships. Our relationship with Panasas works well because of the consistency of their products and partner programs," said Earl Overstreet, founder and president of General Microsystems Inc. (GMI). "Being honored as the Panasas Accelerate Americas Manufacturing Partner of the Year two years in a row is very gratifying because it recognizes the value of GMI as a consistent partner."

MEGWARE_Computer Vertrieb und Service GmbH Panasas Accelerate EMEA HPC and Manufacturing Partner of the Year 2018

"We are proud to have represented Panasas for more than 12 years, jointly developing accounts in several segments such as academic and research HPC, multi-physics simulation and computational fluid dynamics (CFD) manufacturing, and energy, to name a few," said André Singer, chief operating officer of MEGWARE. "Being named Panasas' EMEA HPC and Manufacturing Partner of the year is an honor and a testament to our strong partnership. Our customers expect the highest levels of support, quality, reliability and service, and Panasas never disappoints."

Realnux Systems_ Panasas Accelerate Asia HPC Partner of the Year 2018

"We are delighted to be collaborating with Panasas, most recently at ASR Micro and electronic design automation (EDA) leader Toppan Photomasks," said Mac Wang, project director at Realnux. "Our combined solutions really shine when challenged by some truly demanding HPC workloads, where the technical excellence of Realnux staff, combined with the acclaimed performance, manageability and scalability of Panasas ActiveStor, have delivered world-class manufacturing storage capabilities. So it's especially thrilling to be named Asia HPC Partner of the Year 2018, with several significant joint projects already under our belts."

SHI International Corp._ Panasas Accelerate Newcomer Partner of the Year 2018

TVAR Solutions_LLC Panasas Accelerate Federal Partner of the Year 2018

"We are thrilled to be recognized by the Panasas Accelerate partner program for the third consecutive year," said Dave Saunders, president and chief executive officer of TVAR Solutions. "Panasas' ability to simply and effectively manage massive volumes of data and easily scale to meet the future data storage needs of our customers played a big factor in our success in 2018."

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PROLIM spreads its wings into Delhi NCR, India

21 March 2019

PROLIM Global Corporation inaugurated its new office premises located on Gurgaon JMD Pacific Square, Sector 15. The effort is to accommodate the growing business needs of northern region and to serve our existing customers.

"PROLIM has witnessed great traction globally and this step will create great collaboration between different functions within our organization which will, in turn, benefit our customers and partners. PROLIM has significantly expanded its global footprint and is recognized as the fastest growing company and owned leadership position in USA, India, UK, and Canada", says Prabhu Patil, CEO of PROLIM.

"US Embassy is excited to be present at PROLIM's official inauguration in Delhi NCR. We are highly excited to support PROLIM's business in India" says Erick Kish, US Embassy.

"India is growing rapidly and producing innovative products. Being a SIEMENS partner, PROLIM is well positioned to provide PLM and IOT solutions leveraging SIEMENS products. Having a presence in Delhi NCR region and close to Auto and Agri OEMs and supply chain will accelerate growth" says Sridhar Lal, SIEMENS PLM executive.

"PROLIM initiative is creating value for Auto Industry" says Mr. Sudhanva Jategaonkar, B2B Business Head, Autocar Professional.

PROLIM is a leading global provider of end to end PLM, IT and Engineering Services company, providing a broad range of services and solutions in strategy, consulting, digital, technology and operations.

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PTC Fuels Retail Industry Momentum with PLM Upgrade Program

18 March 2019

PTC is proud to reveal that over the past year, more than a dozen of its valued FlexPLM customers have had their existing implementations upgraded to the latest release - at a low, inclusive cost that covers software and professional services.

Developed in partnership with experienced implementers ITC, a new, agile upgrade approach – supported by heightened standards of technical excellence – has enabled the project time and cost of FlexPLM upgrades to fall dramatically. In a matter of weeks, an enterprise-grade implementation of a previous generation of FlexPLM can now be converted to FlexPLM Version 11, including a move from on-premise hosting to the cloud. This timeline has been road-tested and verified more than a dozen times in the last year by PTC and ITC teams working with large, Tier 1 retailers and brands with multi-category products, whose complex business processes and supply chains are spread across multiple different continents.

"We were impressed by the speed we were able to move to the latest generation of FlexPLM, as well as the low cost of upgrading from one milestone version to another," explained Bhavin Parikh, Senior Application Manager for long-time FlexPLM customer QVC. "Together, the technical progress that PTC has made in update automation, and the agile methodology put together by ITC, enabled a highly efficient, quick and cost-effective upgrade."

At the same time as lowering total cost of ownership, the new upgrade approach also provides an immediate path to all the documented capabilities and benefits of the latest version of PTC's FlexPLM

solution, including:

- Accelerating time to market by up to 45%
- Improving margins by up to 10%
- Improving sales conversion rates by up to 30%
- Reducing sample costs by up to 35%

To make sure that these benefits are available to everyone, these upgrades also included extensive User Acceptance Testing (or UAT,) encouraging PLM adoption from initial concept design to manufacturing.

"The early results of this new upgrade program are incredible," said Bill Brewster, Senior Vice President and General Manager of PTC's Retail Business Unit. "Over the past 12 months we have helped loyal customers, many of them with thousands of PLM users in-house and throughout the extended supply chain, to keep everything they love about working in FlexPLM, and also take confident, cost-effective, next steps on their digital transformation journey. I am excited that today, with minimal disruption, long-term PTC customers (including some of the world's largest brands and retailers) can access the latest and greatest innovations in FlexPLM and from across our Retail Innovation Platform: industry-changing technologies like Artificial Intelligence, Augmented Reality, the revolutionary Material Exchange, and open-standards 3D."

Key to PTC's new upgrade program is the ThingWorx Retail Connector, which allows an endless variety of business systems and solutions to be quickly integrated to FlexPLM, eliminating expensive customization work. Combined with a team of industry professionals who specialize in helping customers get the most from their FlexPLM solution, this new innovation will allow PTC to maintain and even accelerate the pace of upgrades in 2019 and beyond.

"The remarkable results of this upgrade program would not have been possible without our team's extensive knowledge of FlexPLM and PTC's constant pursuit of technical innovation," said Yadvinder Changotra, Global Practice Head – Retail PLM & IoT Solutions, at ITC Infotech. "Working together, we have built a scalable model for low-cost, no-compromise upgrades that can be implemented by trusted consultants anywhere around the world."

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UberCloud: Compendium of Case Studies in Computational Fluid Dynamics Available

20 March 2019

Computational Fluid Dynamics (CFD) is widely used in the engineering community to simulate all kinds of fluid flow phenomena, be it just fluid flow, or be it in a multi-physics scenario coupled with other physics solvers like e.g. with Finite Element Analysis (FEA) of material behavior (like in an airplane wing design), or even more complex fluid-structure-electrical simulation of a living heart.

UberCloud released a collection of 36 CFD case studies summarizing high-performance computing (HPC) Cloud projects in varied CFD-related engineering and scientific simulations which have been performed and executed with the global engineering community over the last six years.

These free "UberCloud Experiments" were started in 2012 to perform engineering simulation in the HPC cloud with real engineering applications. They can be downloaded for free at https://info.theubercloud.com/ubercloud-compendium-cfd

Case Studies included in this compendium:

Team 213: Deep Learning in Computational Fluid Dynamics with MANTAFLOW Team 211: Deep Learning for Steady-State Fluid Flow Prediction with OpenFOAM Team 210: Racing Car Airflow Simulation with ANSYS Fluent Team 207: Modelling Moisture Transfer in a Residential Condominium Tower with WUFI Plus Team 206: Establishing the Design Space of a Sparged Bioreactor with ANSYS Fluent Team 204: Aerodynamic Simulations for a Sportscar Using MantiumFlow Team 203: Aerodynamic Study of a 3D Wing Using ANSYS CFX Team 201: Maneuverability of a KRISO Container Ship Model with Numeca FINE/Marine Team 195: Simulation of Impurities Transport in a Heat Exchanger Using OpenFOAM Team 192: Thermal Modelling of a Fragrance Extraction Reactor with COMSOL Multiphysics Team 190: CFD Simulation of Airflow within a Nasal Cavity Using STAR-CCM+ Team 189: CFD Simulation of Vertical Axis Wind Turbines with STAR-CCM+ Team 187: CFD Analysis of a V6 Intake Manifold Using STAR-CCM+ Team 185: Air Flow Through an Engine Intake Manifold with ANSYS Fluent Team 184: Spray Modeling of PMDI Dispensing Device with ANSYS CFX Team 183: Radial Fan CFD Simulation with CFD Support's Turbo-CFD Team 182: OpenFOAM CFD Modelling and Product Optimization of Dry-type Transformers Team 181: Prediction of Barehull KRISO Containership Resistance with NUMECA FINE/Marine Team 180: CFD SpeedIT Flow for Motorbike Simulation on GPUs Team 177: Combustion Training with ANSYS Fluent in the Cloud Team 169: Complex Blood Flow with OpenFOAM Through Cardiovascular Medical Device Team 159: Aerodynamic Study of an Airfoil in the UberCloud OpenFOAM Container Team 156: Pulsatile Flow in a Right Coronary Artery Tree Using OpenFOAM Team 154: CFD Analysis of Geo-Thermal Perforation with ANSYS Fluent Team 147: Fast Cost-Effetive Compressor Map Generation Using ADS' CFD Solver Team 142: Virtual Testing of Severe Service Control Valve with Autodesk CFD Team 118: Fluid-Structure-Interaction Coupling In-house FE Code with ANSYS Fluent

Team 105: Dam Break Simulation Using Hydro_AS-2d on a Remote HPC Cluster

Team 100: Natural Forced Convection & Thermal Management of Electronics with OpenFOAM

Team 99: North Sea Asset Life Extension – Assessing impacts on Helicopter Operations with STAR-CCM+

Team 94: Gas-liquid Two-phase Flow Application with ANSYS Fluent

Team 81: Water Flow Around a Self-propelled Ship with FlowVision CFD

Team 79: Simulating Air Conditioning in a Building with OpenFOAM

Team 65: Weather Research and Forecasting: Performance and Evaluation of WRF

Team 62: Cardiovascular Medical Device Simulations with OpenFOAM

Team 60: Unsteady Flow Around Aircraft Landing Gear with Gerris CFD Solver

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Yanfeng Visteon and CONTACT Software revolutionize the driving experience

18 March 2019

Yanfeng Visteon, headquartered in Van Buren Township, Michigan, is a supplier of automotive cockpit electronics and is part of the networked revolution. The company, which has been recognized by ABI Research as a top 5 Tier 1 supplier of networked vehicle solutions, designs, develops and produces electronic products for vehicle cockpits of all well-known automobile manufacturers.

The previous PLM system was unable to fulfill the growing requirements in this highly dynamic market. With CONTACT Elements, Visteon found a highly scalable technology platform at its hand. The decision to use CIM Database PLM as the central data hub increased the efficiency of their processes along the entire product development process. Intelligent and automated workflows as well as a highperformance ERP connection significantly improved collaboration and transparency in cross-location development projects. Thus, innovative products and solutions from Visteon will continue to ensure a networked driving experience for customers in the future.

"The use of CIM Database increase the efficiency of our business processes and of other operation systems by sourcing data in a single place, as a result we saved time and money," said Mrs. Annie Liu, Customer Support Management at Yanfeng Visteon.

After a successful implementation in Shanghai, Yanfeng Visteon plans to roll out CIM Database in in Xuzhou City and Chongqing too.

The Partner in this project is EUCI.

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Events News

Altair FekoTM and Altair WinPropTM to be Exhibited at EuCAP 2019 in Krakow, Poland 19 March 2019

Altair will present its electromagnetic solutions at the 13th EuCAP from 31 March – 5 April, in Krakow, Poland.

"At EuCAP we will show how to be successful in radio network planning, based on sophisticated propagation analysis, V2X (vehicle to anything) analysis, RADAR design, and other areas, in particular for communication and sensing at mm-Wave frequencies," said Dr. Pietro Cervellera, vice president EMEA operations. "Our EM solutions help companies all over the world to design and develop better products faster and as a gold sponsor, we are very much looking forward to presenting them jointly with our reseller Des Art during EuCAP 2019."

As gold sponsor, Altair, together with Des Art, Altair's reseller for the Polish market, will exhibit the Altair suite of electromagnetic solver tools, Altair Feko, used for the analysis and design of antennas such as reflector antennas, antennas for radars, and antennas with radomes and Altair WinProp, a leading software for wireless propagation modelling and radio network planning. The Altair solutions are widely used to accelerate the design processes for the automotive, aerospace, defense, communications, consumer electronics, energy and healthcare industries.

Altair will also present a workshop titled 'Efficient Simulation of High-Speed Wireless Communication and Sensing, incl. 5G, in Large and Complicated Scenarios'. Within this workshop Dr. Martin Vogel, principal engineer for EM solutions and WinProp program manager at Altair, will demonstrate how to achieve efficient simulation of high-speed wireless communication and sensing in large and complicated scenarios. The workshop will take place on April 2, during the conference program. Organizers of EuCAP 2019, flagship conference on antennas and propagation, are expecting about 1,500 antenna and propagation experts from around the world to attend the event. The comprehensive five-day program will comprise a large exhibition area, regular, plenary, poster and convened sessions from top academic and industry experts in the antenna and propagation world.

Experience Altair electromagnetic solutions live at booth 24 at EuCAP 2019, and join us for April 2nd workshop by signing up at https://web.altair.com/eucap-2019-workshop. Learn more at www.altair.com.

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Creative Fields to exhibit at NAFEMS Seminar in Zagreb, Croatia

22 March 2019

Creative Fields, a provider of state-of-the-art CFD meshing software, is proud to announce that it will exhibit at the upcoming NAFEMS event (1-day seminar) – The Benefits of Simulation – to be held on the 25th March 2019 in Zagreb, Croatia. Creative Fields will present their achievements, available in the latest release of their product CF-MESH+ 2.3.0. The release includes significant improvements in the robustness and the quality of meshing technology, applicable to very complex geometries.

The Managing Director of Creative Fields, dr.sc. Franjo Juretic, is a contributing member to the event organisation and also a member of NAFEMS Eastern Europe Steering Committee. The committee directs and controls the strategy for delivering the activities of NAFEMS within Eastern Europe.

This NAFEMS seminar aims to:

- Demonstrate the business value of simulation, particularly for small and medium-sized businesses (SMBs) and industries where simulation is not a mature capability;
- Identify successful implementations of simulation which have provided a noticeable return on investment and promote the lessons learned from these implementations;
- Disseminate techniques that will allow organizations to maximize their investment in simulation, including change management, skills development and simulation management;
- Provide guidance on different methods of deploying a simulation capability.

There are still some seats available, you can join and register here.

NAFEMS is a non-for-profit engineering membership association that, among others, promotes adoption of engineering simulation among companies.

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Digital Supply Chain Transformation Takes Center Stage at Velocity 2019

19 March 2019

New Generation Computing, Inc. ("NGC") will showcase how its Andromeda Cloud Platform[®] is driving digital transformation at the Velocity 2019 customer conference, March 25 - 27 in Orlando.

Velocity 2019 includes more than 80 breakout and training sessions from NGC, Logility, Inc., Demand Management, Inc. and Halo, designed to help attendees accelerate their digital supply chain transformations by leveraging best practices and technology innovations. NGC's kickoff session, "Digital Directions: The Future of Fashion," will focus on NGC's strategic vision, product roadmap and the many ways that Andromeda® is helping retailers and fashion brands make faster decisions, align supply and demand, and create a framework for cognitive, autonomous supply chains.

Case study presentations by NGC customers will include:

- "Protect Your Brand: Vendor Compliance throughout the Supply Chain." A leading global apparel company will share how it is using NGC's Andromeda Vendor Compliance and Quality Control to streamline vendor processes, drive continuous improvement in factories, manage environmental compliance and improve quality control processes.
- "The Andromeda PLM Experience." In this panel discussion, a leading men's specialty retailer and a fashion brand will discuss how they are using NGC's Andromeda PLM® solution to become more efficient, collaborate more closely with their vendors, and share product data throughout the entire supply chain.
- "Failure is Not an Option: Managing Product Testing More Effectively." The world's largest men's accessories company will share how it is using NGC Andromeda to automate its product testing capabilities and maintain high standards across more than 50 brands.
- "Trust, but Verify: Improving Product Quality." Three leading fashion companies will discuss their challenges in managing product quality and how they are using NGC's Andromeda Quality Control to streamline quality management processes and improve product quality.

Other NGC sessions will focus on enabling faster, better decisions with supply chain analytics, using Andromeda's material commitment management for lead time reduction, and creating a foundation for digital supply chains using Andromeda. NGC will also hold one-on-one meetings with customers, providing access to NGC consultants, solution experts and executives.

Prior to the conference kickoff, NGC will hold its annual Advisory Board meeting to discuss the latest advancements in the Andromeda Cloud Platform, current initiatives that are underway, and the three-year product development roadmap.

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Siemens to host mining media talk at Bauma 2019

19 March 2019

Siemens will be hosting a mining media talk at the Bauma construction machinery trade fair in April 2019. Roland Ehrl, Minerals Executive Vice President, will be showcasing Siemens' portfolio of products, systems and solutions for the global mining industry. Dan Fodor, Head of Application Management and Product Lifecycle Management (PLM) Minerals, Christian Dirscherl, Vice President Mining Excavation and Transport Minerals, and Zeng Yun, Director Business Development Minerals, will be highlighting digital topics like Siemens' SmartMining, Autonomous Stockyard Management and Minerals Operation Management Solution.

The 'Siemens Mining Media Round Table' will take place on 9 April 2019 at the event in Munich. Registration is required to attend.

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Financial News

C3D Labs Reports FY2018 Results

14 March 2019

C3D Labs, provider of engineering software development toolkits, increased revenues by 54% in 2018, thereby doubling its rate of growth. The software company also expanded its presence in the American and European markets.

Trusted by global software brands and innovative startups worldwide, C3D Toolkit brings core 3D modeling functions to engineering programs that are used in areas like mechanical design, simulation, manufacturing, building information modeling, and electronics design. The modules of C3D Toolkit enable these programs to construct, edit, visualize, and convert complex geometric models with high accuracy and fast performance.

The strategy of C3D Labs has been to focus on the global market, and as a result export earnings now account for 60% of licenses sold. Today, the primary market is the USA, with sales to Russia, Italy, China, and South Korea also attaining a significant share. Over the past year, C3D Labs landed new customers from Denmark, Italy, Japan, Russia, Turkey, and USA.

The following software packages were released in 2018 incorporating geometric modeling kernel, constraint solver, and data exchange technology from C3D Labs:

Altium Designer 19 from Altium – electronic design software

KOMPAS-3D v18 from Ascon – mechanical design software

Delta Design from Eremex – electronic design software

PASS/EQUIP from PSRE Co – piping design software

Renga MEP from Renga Software – MEP (mechanical, electrical, plumbing) software

In addition, the Russian Federal Nuclear Center VNIITF of ROSATOM is ready to release a brand-new CAE (computer-aided engineering) system with 3D visualization delivered by C3D Vision, the newest module of the C3D Toolkit.

"We are proud of the high level of quality software developed by our customers with our C3D Toolkit," said Oleg Zykov, C3D Labs CEO. "According to our customers, we provide a perfect level of technical support. In 2018, we solved 955 customer tickets requesting new features, improvements, and bugs fixes. The average time to solve a ticket decreased by 30%."

Currently, the C3D Labs team is working on the new version of C3D Toolkit to be released in June 2019.

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Upchain Grows 621 Percent YoY Fueled by Enterprise Clients

21 March 2019

Upchain announced it has reached 621 percent ARR year-on-year growth, both by deepening its relationship with its enterprise clients and by growing its SMB market.

"We're incredibly proud of the growth that we've achieved," said founder and CEO John Laslavic.

"Not only have we continued to expand with the clients we have, but we've started to move into the long-ignored SMB space. We're hoping to continue bringing the enormous value of collaboration to design and engineering in a customer-centric way to drive better products to market faster than ever before."

This growth comes on the back of an additional \$3 million investment from existing partners First Ascent Ventures (previously OTEAF) and BDC late last year — additional investment that's driven a major hiring initiative, with 30-plus new hires in Toronto and an additional 23 in Croatia to fuel its engineering arm.

That work has led directly to significant advances in product innovation with a number of high-profile new features launched last year, including custom-built integrations into mechanical and electrical CAD systems, ERP systems and the Google Suite.

"Keeping teams working in the tool ecosystems that they already know and love is absolutely essential to our approach," says Michael Aronzon, CTO.

"We want Upchain to be not only a powerful platform but one that virtually anybody in the world of product development can pick up and use in seconds. That drives our design and development

approach."

Upchain launched in 2015 and raised its \$7.4 million series A in 2018, led by First Ascent Ventures and BDC. Its mission is to disrupt the world of manufacturing by changing how people collaborate on product data. Where traditional solutions are designed to work for engineering, Upchain's platform stretches beyond silos to connect different teams and users with the right data at the right time.

"We're happy with the growth we've had so far and are extremely optimistic about our continued growth through 2019," says Laslavic. "We think there's a huge market to capture and with the team we've built within Upchain and with our investment partners, I'm excited to say that we're the one to do it."

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Implementation Investments

AEC Firm Dudek Chooses Workspot Workstation Cloud on Azure, Powered by NVIDIA GPUs, to Transform Complex Image Processing and Visualization

19 March 2019

Workspot announced that Dudek has successfully deployed Workspot Workstation Cloud on Microsoft Azure for their architecture, engineering and construction (AEC) firm. Project data is uploaded from drones to a cluster of Workspot cloud workstations for parallel processing across NVIDIA GPUs in Microsoft Azure, transforming the way complex images are processed and visualized.

Dudek's on-premises infrastructure, including physical GPU workstations and a legacy VDI solution, was limiting agility and innovation and slowing project delivery to its clients. The firm needed the data collected from drone flights at projects sites to be actionable more quickly – at the cloud-edge. They also needed to alleviate performance problems brought on by latency for survey engineers in the field and in branch offices. The challenges of improving performance for GPU-intensive workloads, in addition to the cost and complexity of maintaining on-premises VDI, brought Dudek to Workspot Workstation Cloud.

Brian Nordmann, chief information officer, Dudek, said: "Our survey engineers, whether they are in our headquarters, in a remote office or out in the field, are delighted with the performance they are seeing when using ArcGIS on their Workspot cloud workstations. We're planning to deploy cloud PCs to the rest of our employees for secure, fast access to all their corporate apps, no matter where they are. Workspot dramatically decreased our time to get deliverables into the hands of our clients, giving us a competitive advantage."

Workspot Workstation Cloud provides turnkey, enterprise-ready, cloud PCs and workstations powered by NVIDIA GPUs and virtualization software on Microsoft Azure. Benefits of Dudek's cloud workstations include:

Faster data processing: Data uploaded from drones is processed in a fraction of the time it took previously – from five days to six hours.

Better performance: Survey engineers now enjoy performance that isequal to or better than what they were getting on physical workstations for demanding design and visualization

New business agility: The firm is able to immediately respond to changing project requirements, pursue new business and address customers' needs.

Simplified IT: Dudek's IT team gets simplified infrastructure, fewer management headaches, lower capital expenditures and the ability to redeploy valuable IT resources.

Harry Labana, chief customer officer, Workspot, said: "Firms like Dudek are innovating to transform the AEC industry with their use of cloud workstations to address complex use cases requiring highperformance computing, and that's a great boost to their productivity. Workspot's on-demand, cloud PC service is based on a globally distributed architecture, which means organizations in any industry can instantly have a global presence across 54+ Azure cloud regions. This level of flexibility and agility drives endless possibilities for our customers' business growth."

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Mubea Chooses pSeven for Optimization of TRB® Rolling Technology

22 March 2019

Mubea is one of the world leading manufacturers of lightweight components for the automotive industry. Since 2001 Mubea delivers Tailor Rolled Blanks (TRB®) to nearly all automotive OEMs. The technology of flexible rolling enables the production of sheet material with varying sheet thickness.

Automotive body parts are designed with respect to several disciplines such as function, cost, design or manufacturing. Often the resulting structures are a compromise of these disciplines. When manufactured from constant sheet material these parts are inhomogeneously loaded. With the application of TRB, it is possible to take advantage of this uneven material usage and reduce sheet thickness in areas with low loading.

In order to leverage the full potential of this technology, optimization strategies become the key enabler for efficient design. Optimization strategies are well known and widely applied in the automotive industry. There is a wide range of software solutions that offer process integration and design optimization (PIDO) capabilities. The increasing complexity in optimization tasks made it necessary for Mubea to review its PIDO strategy and explore alternatives in order to find the best solution for future optimization tasks. After evaluating 5 different PIDO tools, pSeven became the solution of choice for TRB optimization task in the upcoming years.

Tailor Rolled Blanks are manufactured through a special technological process chain and hence require a special CAE simulation chain. Mubea has developed a dedicated in-house software solution to handle the evaluation of a design point in order to enable automatic design exploration. This solution is based on the Python code.

"The integration of the in-house Python code into a pSeven workflow is quite easy and enables the reuse of existing logic. Another benefit of pSeven is the availability of the algorithms as a pure Python library pSeven Core. With this library, it is possible for us to make use of the provided algorithms from Python directly. This enables the easy development of our own optimization strategies."

TRB parts are mostly designed with respect to highly non-linear and numerically noisy load cases. The use of fast and robust predictive models is the key to optimize parts with short turnaround time.

"In our benchmark, pSeven showed the best model quality when compared to the other software.

With SmartSelection models can be trained with good prediction capabilities automatically. Another interesting feature in pSeven is the Dimension Reduction capability. Based on a Design of Experiments (DoE) of the complete problem dimensionality, the number of dimensions can be reduced. This helps us to overcome the curse of dimensionality and train predictive models for a high number of dimensions."

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Swiss Brand KJUS Speeds into the Future with Centric PLM

19 March 2019

KJUS, based in Switzerland, has selected Centric Software's Product Lifecycle Management (PLM) solution.

KJUS was founded in 2000 by entrepreneur Didi Serena and Olympic ski champion Lasse Kjus, who collaborated to produce stretch skiwear that shook up the market with new standards of comfort and functionality. KJUS is renowned for its innovative, high-performance materials and now produces award-winning ski, golf and lifestyle collections that are sold in 30 countries.

KJUS had an old PLM system but it struggled to cope with expansion into new lines and market demands.

"Innovation is in our DNA and customers constantly expect new products," explains Simon Meier, Head of Information Management at KJUS. "Meanwhile, time to market is getting faster. We needed a solution that could maintain data integrity with a single source of truth, reduce manual work, connect to other enterprise systems and streamline workflows. The goal is to bring us closer to the end consumer without compromising on performance and quality."

KJUS wanted the best PLM solution on the market and found an ideal match in Centric 8 PLM.

As Meier says, "Centric is the strongest and most comprehensive solution. It's a modern, flexible system that is focused on configuration, not programming. Centric has many customers in our industry, so our processes will be supported with best practices. Like KJUS, Centric loves innovation and their system has a fresh look and feel."

"We have a clear business strategy and Centric PLM is a foundation that will give us agile processes and system support," concludes Meier. "Investing in digitalization is a must and Centric is a partner that can bring us to the next level. Centric holds up a mirror and asks the right questions to challenge us. It's a great relationship that will get even stronger."

"We would like to welcome KJUS on board," says Chris Groves, President and CEO of Centric Software. "We are delighted to work with a partner who shares our belief in the importance of innovation, performance and digital transformation and we are looking forward to partnering with them now and into the future."

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Product News

Altair OptiStructTM Runs up to 10x Faster on NVIDIA GPUs

20 March 2019

Altair announced that it has achieved up to 10x speedups with the Altair OptiStruct[™] structural analysis solver on NVIDIA GPU-accelerated system architecture — with no compromise in accuracy. This speed boost has the potential to significantly impact industries including automotive, aerospace, industrial equipment, and electronics that frequently need to run large, high-fidelity simulations.

"This breakthrough represents a significant opportunity for our customers to increase productivity and improve ROI with a high level of accuracy, much faster than was previously possible," said Uwe Schramm, Altair's chief technology officer for solvers and optimization. "By running our solvers on NVIDIA GPUs, we achieved formidable results that will give users a big advantage."

The test suite included a variety of industry models including multiple solution types such as statics, frequency response, buckling, and optimization.

Support for GPU acceleration began with OptiStruct's direct solver and with the large-scale NVH solver AMSES, a standard feature of OptiStruct. AMSES drastically cuts the time required to compute eigenvalues for analysis in NVH simulations, and it can rapidly calculate thousands of modes with millions of degrees of freedom. The same impressive levels of acceleration were achieved with both solvers.

Most recently, the OptiStruct development team extended GPU support by porting OptiStruct's PCG iterative solver on the same NVIDIA GPU-accelerated system, which resulted in some of the highest performance boosts seen. For some models — such as compact, block-like, solid structures — the PCG solver can be faster than the direct solver, especially when GPUs are in play. The upcoming OptiStruct 2019 release will include support for multiple GPUs.

OptiStruct speedup on GPU-accelerated systems enables scaling for large models, particularly NVH models, that may run poorly or not run at all on CPU-based systems. The greater memory capacity of GPUs, including the ability to use multiple GPUs, means they can handle much larger, more complex models.

NVIDIA® Quadro® GV100 GPU technology was used for the solver runs and was compared with dual Intel® Xeon®Sandy Bridge-EP 3.1GHz 16-core CPUs with 256GB of RAM. Run times compared were total elapsed times, or wall times, for the solution to complete.

Altair OptiStruct is an industry-proven, modern structural analysis solver and is the market-leading solution for structural design and optimization. Based on finite-element and multi-body dynamics technology, and through advanced analysis and optimization algorithms, OptiStruct helps designers and engineers rapidly develop innovative, lightweight, and structurally efficient designs. For more information, please visit https://altairhyperworks.com/product/OptiStruct.

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Arvizio Launches Revit Model Optimization for HoloLens, Magic Leap & Standalone XR Experiences

18 March 2019

Arvizio announced the availability of market leading Revit 3D model optimization tools for their MR Studio mixed reality software platform.

Revit and other large-scale structural models are often too large and complex to be rendered on standalone AR, MR & VR headsets or mobile devices. This has hindered the use of standalone devices for immersive experiences in architecture, engineering, construction and energy fields where large-scale 3D models are widely used. Arvizio has tackled this problem by offering a suite of 3D model optimization tools that allow Revit, IFC and other complex 3D models to be simplified with a user guided, automated workflow, providing users the ability to inspect and customize the results of the optimization process at each step.

The Revit optimization tools guide the user through the steps required to optimize complex models to achieve a desired level of detail (LOD) that fits the requirements of specific headsets. The tools recognize objects via their Revit metadata and automatically group those objects. A preferred level of optimization can then be applied to each group, and the results of the optimization can be inspected in real time in a graphical viewing panel, allowing trade-offs to be made interactively during the optimization process.

In addition, the new tools identify if the model has been suitably optimized for specific headset(s) which allows complex 3D models with many millions of polygons to be successfully visualized on Microsoft HoloLens, Magic Leap, mobile augmented reality devices and a variety of VR headsets.

"Our customers often design and work with extremely complex 3D Revit models and are seeking to take advantage of new and emerging 3D XR visualization technologies. To date, the optimization of such models has been a difficult and time-consuming process" said Jonathan Reeves, Arvizio's CEO. "We are delighted to introduce a suite of optimization tools that allow users to interactively control the process and ensure the optimized models will provide the desired experience for the target audience."

The new MR Studio Revit optimization tools are available immediately for customer trials. Arvizio will be offering live demonstrations of the platform at the AEC Next/Spar 3D conference and expo on May 21 - 23, in Anaheim at booth 725.

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Dematic Introduces Modeling Software to Validate Intralogistics System Performance

12 March 2019

Dematic introduces Dematic iQ Virtual, a new emulation and simulation platform, that is used to validate and visualize the operational aspects of automated intralogistics systems for the warehouse. Dematic iQ Virtual allows users to thoroughly explore a proposed system configuration in a virtual environment and gain a true perspective on precisely how the system will perform in actual operation.

Dematic iQ Virtual provides an isolated, digital twin of the production environment where extensive

testing of the system occurs. The virtual emulation model uses graphic-rendering technology to accurately portray labor productivity, inventory flow and the efficiency of material handling automation.

A direct connection to Dematic iQ Optimize Warehouse Execution Software (WES) enables the virtual emulation model to verify efficient system operation, confirm functionality of the software integration and determine how the system will perform during a variety of operating conditions. Dematic iQ Virtual is ideal for evaluating various "what if" scenarios to determine impact on system performance. This evaluation process drives engineering improvements to system design. The emulation modeling software is used to evaluate the designs of both production and distribution intralogistics systems.

According to Scott Wahl, Vice President of Dematic Software Center of Excellence, "Dematic iQ Virtual can corroborate that the intralogistics system, execution software and material handling automation will meet and exceed the performance expectations of the user. Furthermore, the emulation software allows users to be immersed into the automated warehouse environment with a three-dimensional perspective view or with a walk-through of the virtual warehouse using a virtual reality headset."

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Gerber Empowers Speed & Connectivity with YuniquePLM's New UI and Expanded Digital Integrations

19 March 2019

Speed and personalization have become the new normal in the fashion industry as consumer trends and expectations shift quickly. Brands, retailers and manufacturers are racing to keep pace as they strive to win the hearts, minds and loyalty of their consumers in an increasingly competitive marketplace. "To create personalized experiences and stay on trend, brands need to improve data analytics and integration across their supply chain," said Clayton Parker, Director of PLM Product Management, Gerber Technology. "With our new YuniquePLM® Version 8, we've introduced a new UI, built features based on our customers' needs, and added integrations to enable our customers to analyze trends and seamlessly pass data across their workflow."

The latest version of YuniquePLM is part of an aggressive software release schedule Gerber has planned for 2019. Version 8 focuses on functionality, usability, and configuration and includes a new and improved user interface. "The updated UI is a great improvement, along with additional functionalities. The visuals are clean and streamline, moving you through the process quickly. Gerber continues to prove themselves to be forward thinking in their approach to the world of PLM", said June Evans, Director of Technical Design at CC Filson.

Capitalizing on its Cloud platform Version 8 is one of 7 releases of YuniquePLM within the past 12 months which included over 100 new features – many of which are based on direct requests and partnerships with our customers. Here are some of the 30 plus new features in the latest version:

- New, modern interface to maximize the amount of data you see on screen.
- A new functionality called Direct Access allows users to directly open digital assets from YuniquePLM in the software application of their choice. Eliminating the need to download and upload files.

- The new Quick Sample feature allows users to quickly and easily request a sample in a few steps and allows the user to view and manage Virtual Samples with a new Gerber 3D Viewer.
- Better integration with Gerber's industry-leading AccuMark® software, making it easy to access models and directly launch into AccuMark for further editing during the sample making process.
- Seamless integration with True Fit's Fashion Genome[™], the industry's most comprehensive data collection that helps consumers choose the right fit every time.

"We know our customers are facing incredible demands to balance speed and creativity." continued Parker. "With our new UI and functionality like Direct Access, we focused on eliminating unnecessary and time-consuming steps. Additionally, our Cloud platform and SaaS model allows us to continuously deploy new features every couple of weeks, so our customers are continually getting the latest version without paying any additional fees."

To ensure users have an ideal experience during Gerber's aggressive product launch roadmap, the company has also focused on expanding its comprehensive online and in-person training through their training platform, Gerber University. Gerber University includes industry and product specific training to support users across Gerber's entire suite of solutions.

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Intellinum Flexi LogiPro is Integrated with Oracle Cloud and Now Available in the Oracle Cloud Marketplace

17 March 2019

Intellinum Inc, a Gold level member of Oracle PartnerNetwork (OPN), today announced that Flexi LogiPro has achieved Integrated with Oracle Cloud status and is now available in the Oracle Cloud Marketplace offering added value to Oracle Cloud Applications customers. The Flexi LogiPro enables Oracle SCM Cloud and Oracle WMS Cloud customers to perform their mobile inventory and warehouse transactions from a single mobile application and provides users with an intuitive and customizable user interface running on mobile devices with Windows CE/Mobile, Android, and iOS.

The Oracle Cloud Marketplace is a one-stop shop for Oracle customers seeking trusted business applications and service providers offering unique business solutions, including ones that extend Oracle Cloud Applications. Oracle Cloud is the industry's broadest and most complete public cloud, delivering enterprise-grade services at every level of the cloud technology stack including Platform as a Service (PaaS), Infrastructure as a Service (IaaS), and Data as a Service (DaaS).

"Flexi LogiPro delivers an innovative mobile solution that works for both Oracle WMS Cloud and Oracle SCM Cloud. It provides a modern intuitive graphical user interface and personalization capability so customers can augment them per their business requirements," said Romi Halimman, President and CEO of Intellinum. "Intellinum's participation in the Oracle Cloud Marketplace further extends our commitment to the Oracle community and enables customers to easily reap the benefits of Flexi LogiPro. We look forward to leveraging the power of the Oracle Cloud to help us achieve our business goals."

"Intellinum's commitment to innovation with the Oracle Cloud and track record of quality execution help our mutual customers receive cloud-enabled SCM and WMS solutions ready to meet critical business needs," said David Hicks, vice-president, WW ISV Cloud Business Development and Marketing, Oracle.

Intellinum's Flexi LogiPro has also achieved Powered by Oracle Cloud status which recognizes OPN member solutions that have been tested or verified to run on Oracle Cloud Infrastructure. This achievement offers customers the confidence that the partner's application is supported by the Oracle Cloud Infrastructure SLA, enabling full access and control over their cloud infrastructure services as well as consistent performance.

The Oracle Cloud Marketplace offers an intuitive user interface to browse and search for available applications and services, as well as user ratings and reviews to help customers determine the best business solutions for their organization. With its new automated application installation features, customers can easily deploy provider business applications from a centralized cloud interface.

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Khronos Releases OpenXR 0.90 Provisional Specification for High-performance Access to AR and VR Platforms and Devices

18 March 2019

The Khronos® Group, an open consortium of leading hardware and software companies creating advanced acceleration standards, announces the ratification and public release of the OpenXR[™] 0.90 provisional specification. OpenXR is a unifying, royalty-free, open standard that provides high-performance access to augmented reality (AR) and virtual reality (VR)— collectively known as XR— platforms and devices. The new specification can be found on the Khronos website and is released in provisional form to enable developers and implementers to provide feedback at the OpenXR forum.

The OpenXR 0.90 provisional release specifies a cross-platform Application Programming Interface (API) enabling XR hardware platform vendors to expose the functionality of their runtime systems. By accessing a common set of objects and functions corresponding to application lifecycle, rendering, tracking, frame timing, and input, which are frustratingly different across existing vendor-specific APIs, software developers can run their applications across multiple XR systems with minimal porting effort—significantly reducing industry fragmentation.

The Khronos OpenXR working group was formed in early 2017 with the support and participation of leading XR companies. Throughout the development of the specification, multiple Khronos members have been developing independent implementations to ensure a robust and complete specification. Many of these implementations are becoming available for developers to evaluate including the 'Monado' OpenXR open source implementation from Collabora and the OpenXR runtime for Windows Mixed Reality headsets from Microsoft shipping today. Additionally, the Unreal Engine from Epic plans to continue to support OpenXR.

Links to these implementations and more information can be found on https://www.khronos.org/openxr.

"OpenXR seeks to simplify AR/VR software development, enabling applications to reach a wider array of hardware platforms without having to port or re-write their code and subsequently allowing platform vendors supporting OpenXR access to more applications," said Brent Insko, lead VR architect at Intel and OpenXR working group chair. "The OpenXR provisional specification—together with the runtimes publicly available at launch and coming in the next few weeks—will enable hands-on, cross-platform testing by application and engine developers. The working group welcomes developer feedback to ensure an OpenXR 1.0 specification that truly meets the needs of the XR industry."

Industry Support for OpenXR Provisional 0.90

"It is significant when so many key players in the industry come together to create an open standard like OpenXR. We look forward to seeing adoption of the new standard, and believe that reducing barriers for cross-platform XR applications accelerates growth, innovation, and diversity in the VR and AR industry," said Nandan Nayampally, vice president and general manager, Client Line of Business, Arm.

"Being dedicated to royalty-free open standards and open source technologies, Collabora is proud to be one of the major contributors of the OpenXR working group and its first release today. In addition to this milestone, Collabora is excited to announce Monado, an open source implementation of the newly released OpenXR spec. More than just a vendor SDK, Monado is an open source project and codebase to harness and focus wider community effort around XR technologies. Collabora plans to provide the technical foundation and industry leadership to accelerate the development and deployment of XR technologies on Linux while providing XR device vendors the choice to use and contribute to a Linuxbased platform for their XR products," said Philippe Kalaf, CEO, Collabora.

"Epic believes that open standards like OpenXR are essential foundations for a vibrant, multi-platform VR and AR industry in the coming years. We've supported OpenXR since its inception, including powering the first public demo of OpenXR at SIGGRAPH last year, and hope to see the ecosystem continue to grow with the first public release of the spec at GDC," said Tim Sweeney, founder and CEO of Epic Games. "Epic plans to continue supporting OpenXR in Unreal Engine 4."

"Facebook and Oculus continue to believe in the value the OpenXR standard delivers to users and developers. We plan to provide runtime support for apps built on OpenXR 1.0 on the Rift and Quest platforms later this year," said Nate Mitchell, Oculus Co-founder and head of VR product, Facebook.

"HTC VIVE is committed to creating a viable ecosystem for the XR industry which is why we are proud to support OpenXR," said Vinay Narayan, vice president, Platform Strategy, HTC. "Bringing the community together to help define standards and best practices, allows all of us to move forward, together."

"Microsoft believes that for mixed reality to thrive, it must be open for everyone: open stores, open browsers and open developer platforms. We were proud to demo our OpenXR runtime at SIGGRAPH last year, and we're dedicated to supporting the launch of OpenXR this year on Windows Mixed Reality and HoloLens 2," said Alex Kipman, technical fellow at Microsoft. "To help developers provide feedback on the provisional OpenXR spec, we're releasing today a developer preview of our OpenXR runtime with support for Windows Mixed Reality headsets."

"The next key enabler to drive the XR ecosystem will be OpenXR: an open, broadly supported API standard for cross-device compatible applications. It will build on the impressive progress in the XR field over the last few years, including multiple great HMDs and powerful VR-specific GPU features," said David Weinstein, director of Virtual Reality at NVIDIA.

"Tobii has been part of the OpenXR initiative for years and is committed to this effort," said Henrik Eskilsson, CEO of Tobii. "We believe that an open standard, multi-platform API holds great promise to enable developers to introduce eye tracking in a uniform and predictable way for XR applications. OpenXR will reduce the complexity of supporting multiple platforms and devices, and let developers spend more time creating amazing content." "Unity is committed to being an open and accessible platform and we remain supportive of open standards for XR applications and devices," said Ralph Hauwert, vice president of platforms at Unity Technologies. "To that end, we're excited about OpenXR and believe this is a significant step towards a more open ecosystem."

"At Varjo we're pushing professional virtual reality to a level that is truly useful for enterprises with the highest possible visual fidelity. For that we need standards that make it easier for companies to interoperate with the best technologies," said Rémi Arnaud, principal architect at Varjo. "Varjo is committed to support OpenXR."

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Maplesoft Announces New Release of Flagship Software Maple

18 March 2019

MaplesoftTM today announced a major new release of its flagship product, MapleTM, the mathematical software that makes it extremely easy to analyze, explore, visualize, and solve math problems. Maple 2019 includes substantial improvements to its mathematical engine, for both core routines and specialized tools. The release also provides advances to the Maple programming language, more education tools, new visualizations, and other improvements for the mathematicians, educators, students, engineers, and scientists who use Maple.

Maple 2019 includes significant enhancements to the core mathematics that customers use every day, either directly or through computational functions that call on fundamental routines. In addition, many specialized tools have been improved or expanded, and support for new advanced areas of computation has been added. Improvements include:

- Hundreds of improvements to core functionality, such as solving equations, integration, factoring, and differential equations
- Increasing the already sizable advantage Maple has in finding symbolic solutions to partial differential equations, including new methods that solve new classes of problems, more flexibility in choosing the methods to try, and improved simplification of the results
- Significant work to further strengthen, consolidate, and polish Maple's support for tensor computations, making Maple unmatched in the field, with support for classical and quantum mechanics, special and general relativity, and standard tensor notation for input and output
- More group theory tools for constructing, computing with, and visualizing even more groups, along with significant performance improvements
- More signal processing, including new algorithms, manipulation tools, and visualization techniques
- A comprehensive, easy-to-use environment for the parallel computation of the electronic energies and properties of molecules, available in the new add-on product, the Maple Quantum Chemistry Toolbox from RDMChem

Maple 2019 also includes a wide variety of improvements in other areas, such as enhancements to the Maple programming language that help customers write more efficient code, a completely redesigned

start page that makes it even easier for new users to become productive quickly, new visualizations for analyzing data, and additional interactive Math Apps that support teaching and learning key concepts of computer science.

"There is no doubt that Maple 2019 is another strong step ahead in increasing the breadth and depth of our mathematical engine," says Dr. Laurent Bernardin, Chief Executive Officer at Maplesoft. "Maple is the undisputed leader in a wide cross-section of mathematical computing, like symbolic solutions for problems in differential equations, partial differential equations, computational physics and tensor analysis. If you are a mathematician working on a research problem, an engineer performing design calculations, a student looking for insight, or a scientist studying the universe, Maple 2019 will take you further."

Maple is available in several languages including French, Simplified Chinese, and Brazilian Portuguese. A Japanese version of Maple 2019 will be available in a few weeks.

For more information about new features in Maple 2019, visit http://www.maplesoft.com/products/maple/new_features

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New Version of PTC's Award-Winning CAD Platform Introduces a Renaissance in Design

19 March 2019

PTC today announced the latest release of its Creo® 3D computer-aided design (CAD) platform, which enables engineers to harness innovative design and manufacturing capabilities in one environment. Creo 6.0 introduces new capabilities in real-time simulation and extends the capabilities of augmented reality (AR) and design for additive manufacturing, along with numerous key productivity enhancements.

In the fast-changing world of product design, thousands of leading engineering and manufacturing companies rely on Creo to build better products faster. Engineers can drive innovation in their design process with embedded simulation and can quickly turn ideas into smart, connected products with IoT-driven design, all while collaborating in real-time with stakeholders around the world using integrated AR experiences.

"PTC is leading a renaissance in design. As companies work to bring their products to life digitally, they're turning to Creo for real-time simulation, design for additive manufacturing, and more immersive, efficient, and secure collaboration using cloud-based augmented reality," said Brian Thompson, SVP and general manager, CAD, PTC. "For 30 years we've been a leader in the CAD market and have helped our customers differentiate in their own markets. Now we're enabling customers to innovate further with new capabilities that support the new frontier of industrial design, and we are doing it all within the Creo platform."

Leverage Real-Time Simulation

The recently announced Creo Simulation Live offering gives real-time feedback on design decisions as they are made, allowing for simulation-driven design. Creo Simulation Live is a fast, easy-to-use tool that's fully integrated into the Creo modeling environment and gives results in seconds as it runs in the background. Designers can now iterate faster, discover problems earlier, streamline their workflow, cut costs, generate more options, and get better products to market faster.

Collaborate with Augmented Reality

AR is improving the way engineers design and collaborate. This cloud-based technology offers an efficient way for engineers to share design information and collaborate securely with colleagues, suppliers, customers, and manufacturing partners. With Creo AR Design Share integrated into every seat of Creo, designers and manufacturers can iterate faster, make fewer prototypes, and engage in more meaningful design reviews. Creo 6.0 includes new capabilities to make AR even more valuable with model and permissions management for up to 10 experiences and the ability to view models at full scale using smartphones, tablets, and HoloLens. AR experiences can now be easily accessed and launched using links, ThingMarksTM, and QR codes.

Design for Additive Manufacturing

Creo delivers the tools and connections needed to drive additive manufacturing, enabling an even broader array of manufacturing processes to be supported based on demand. Users can design, optimize, validate, and print check without leaving Creo, enabling them to reduce overall process time, tedium, and errors. Creo 6.0 delivers even greater flexibility for designers by enabling them to build stochastic foam or conformal lattices, formula driven lattices, such as Gyroids, and define custom lattices using Creo geometry. Users now have the ability to analyze and optimize build orientation, enabling them to reduce print time, minimize support structures, or maximize tray utilization. Creo 6.0 also introduces expanded support for 3MF.

Improve Productivity

Creo 6.0 provides increased usability, including an improved UI for a more efficient user experience with new mini-toolbars for creating and modifying features, modernized feature dashboards, and enhancements to the model tree. Other enhancements include improvements to advanced framework and intelligent fastener extensions, model-based definition, cabling, and core modeling.

Learn More

For more information about the features available in the new Creo 6.0 release, please visit: www.ptc.com/en/products/cad/creo/whats-new.

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Patran 2019.0 delivers exciting new enhancements for smoother and better user experience

16 March 2019

MSC Software Corporation announced Patran 2019 release with exciting new enhancements to make the user experience even better.

Highlights of this release include:

Contact Model Checking with HDF5 Results Support

Patran now supports Contact Model Checking features that were recently introduced to MSC Nastran. Users can now use Contact Model Check to verify if initial contact status occurs before the analysis is performed. When it is enabled, Patran will automatically create an HDF5 results file so that users can visualize and pre-check contact issues such as potential adjustment of the geometry induced by initial stress-free request, and so on.

SuperGroup Support

SuperGroups are a simple ability to create group of groups. SuperGroups are typically used simply for the ease of posting and unposting a number of groups in single operation rather than selecting all groups of interest. SuperGroups is a special approach in Patran 2019 which is used to organize in an easy and efficient way different analysis scenarios in the same model.

Maximum/Minimum Load Case Tracking

Patran 2019, now extends its capability for extraction Maximum and Minimum across results cases/layers to make results more insightful. In addition to simply extracting MaxMin results, the actual Maximums or Minimums of the derived comparison value are retained and load case tracking results are retained to indicate to the user from which load case the Max/Min occur.

Enhanced Group Mirror Support

This release, taking in account customization capability with uses Patran Command Language, completes the group mirror functionality for the mirror of Element and Material Properties and Loads and Boundary Conditions (LBCs) defined by PCL fields.

Crash Reporting System

A new crash reporting system is introduced in this version, supported in both Windows and Linux platform, which is meant to help MSC Software make the Patran application as robust as possible.

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Renault-Nissan-Mitsubishi Launches Alliance Intelligent Cloud on Microsoft Azure

20 March 2019

Renault-Nissan-Mitsubishi cloud alliance today announced the production release of the Alliance Intelligent Cloud, a new platform that is enabling Renault, Nissan and Mitsubishi Motors to deliver connected services in vehicles sold in nearly all 200 markets served by the Alliance member companies. Culminating joint development efforts between the Alliance and Microsoft, the auto industry's first global and most ambitious connected vehicle program will be deployed utilizing cloud, artificial intelligence (AI) and IoT technologies provided by Microsoft Azure. Azure provides the Alliance with a global data platform to securely capture, manage and analyze vehicle data to deliver intelligent services based on the vast volume of data created by connected vehicles.

Kal Mos, Global Vice President of Alliance Connected Vehicles at Renault-Nissan-Mitsubishi, said: "Today we are deploying a vehicle connectivity platform that will transform the digital experience for customers of Renault, Nissan and Mitsubishi. Through our collaboration with Microsoft, we are introducing the most powerful and far-reaching connected vehicle platform. Leveraging the size and scale of the Alliance, we have built an intelligent cloud platform that sets the pace for our industry."

"Renault-Nissan-Mitsubishi is a longstanding partner and our first strategic partner for the Microsoft connected vehicle platform." said Jean-Phillipe Courtois, EVP and President, Microsoft Global Sales, Marketing & Operations at Microsoft. "Today's production release of the Alliance Intelligent Cloud enables a new generation of connected services powered by Microsoft Azure to come to market."

The first vehicles produced with Alliance Intelligent Cloud technology will be the all-new Renault Clio and selected Nissan Leaf models sold in Japan and Europe. These are also the first vehicles powered by the Microsoft connected vehicle platform available to consumers at scale. Vehicles utilizing the Alliance Intelligent Cloud will benefit from seamless access to the internet, providing enhanced remote diagnostics, continuous software deployment, firmware updates as well as access to infotainment services.

The Alliance Intelligent Cloud is a highly-scalable platform and will consolidate multiple legacy connected vehicle solutions with current and future connected car features and business operations that will support mobility services. The data-driven platform will enable advanced AI and analytics scenarios and accelerate time to market for new innovations and business initiatives.

Optimized for speed and efficiency, the Alliance Intelligent Cloud will connect to vehicles and share digital features and future innovations across multiple models and brands for consumers in different regions around the world. Features consolidated onto the connected platform include remote services, proactive monitoring, connected navigation, connected assistance, over-the-air software updates and other customer tailored services.

The Alliance is taking a unique approach to addressing the business opportunity provided by connected vehicles by owning, operating and designing its own intelligent cloud platform on Azure.

The Alliance Intelligent Cloud is capable of connecting Alliance vehicles with future smart cities infrastructure as it develops and with potential future partners. With this new initiative, any third-party seeking to connect with all legacy and future connected Alliance vehicles will have a single point of contact to partner with.

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SAP Analytics Cloud Features New Augmented Analytics and Collaborative Enterprise Planning Capabilities

19 March 2019

SAP today announced enhancements to the SAP Analytics Cloud solution, including augmented analytics, business intelligence (BI), enterprise planning workflows and data integration capabilities.

"The combination of machine intelligence and human creativity is where analytics is at its best," said Gerrit Kazmaier, senior vice president, SAP HANA and Analytics. "With SAP Analytics Cloud, our focus is continuous innovation in a unified solution that is intuitive, powerful and designed for the business user. We continue to provide our customers with an end-to-end data and analytics approach enabling confident, data-driven decisions and intelligent processes that power better business outcomes."

Augmented Analytics

Building on the augmented analytics capabilities already available, users can add new machine learning and artificial intelligent capabilities to existing business intelligence and planning workflows. Enhanced "search to insight" capabilities make it easier for users to ask questions of their data in natural language, as well as automate insights with the "smart discovery" capability, which now includes key influencers, unexpected values and simulations. With the "smart predict" capability, business analysts can train models to predict future outcomes. Enhancements include time series models and user experience improvements that make it easier for analysts to predict future outcomes and automate decisions.

These capabilities have enabled customers such as FC Nuremberg to be more agile and transformative.

"Being data driven is critically important to football clubs," said Dr. Mario Hamm, director of finance, FC Nuremberg. "With SAP Analytics Cloud we have transformed how we evaluate our players. Using its augmented BI capabilities, we can see what really influences player performance and what we can do to improve it."

Enterprise Planning Features

Collaborative enterprise planning enables better business outcomes by bringing users together to align plans across the enterprise for one version of the truth. With SAP Analytics Cloud, customers can analyze, plan and predict all in one place to accelerate planning cycles and make intelligent decisions. Enhanced live connectivity to the embedded models of the SAP Business Planning and Consolidation application allows customers to leverage their existing investments and connect complex planning processes to the cloud. With new capabilities for end users, business plans can be created and adjusted within SAP Analytics Cloud and other tools, including Microsoft Excel. This allows organizations to extend and align plans in finance and across the enterprise to make the best end-to-end plan for the business.

Data and Analytics Platform

The addition of more than 100 new data sources allows users to easily connect to even more data and brings the total number of data sources to more than 250. Enhanced live connectivity allows customers to get even more value with SAP Analytics Cloud. Live access to trusted business sources such as SAP BusinessObjects solutions, the SAP HANA business data platform (on-premise and service), the SAP Business Warehouse application, SAP S/4HANA, SAP S/4HANA Cloud and the SAP Marketing Cloud solution means customers can access data where it resides without moving it to the cloud.

SAP Analytics Cloud is also integrated with the SAP BW/4HANA 2.0 solution, providing customers with end-to-end analytics and data warehousing capabilities. The SAP Analytics Hub solution, delivered with SAP Analytics Cloud, offers a single point of access for all analytics content, SAP or non-SAP, no matter where it resides. These enhancements help customers simplify access to analytics scattered across their organization and provide a single version of the truth for making fact-based decisions.

SAP Analytics Cloud has more than 2,400 customers and is available for trial and purchase. Learn more about SAP Analytics Cloud.

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Soom Introduces Solution to Modernize Instructions for Use with First-of-its-Kind Mobile Scanning Feature

19 March 2019

Soom announces a solution that enables compliance with the electronic instructions for use (eIFU) requirements (from EU No. 207/2012) included in the European Union's upcoming Medical Device Regulation (MDR). The solution is the first to offer medical device manufacturers the option to develop a mobile scanning application that eliminates the search process and guards against user error. It's also the only solution that automatically delivers IFU in a user's preferred language, providing quicker access to this critical information.

The goal of MDR, which goes into effect May 26, 2020, is to increase medical device safety and

effectiveness. Modernizing the delivery of IFU—from printed to digital—is one way the new regulations will accomplish this. For many manufacturers, complying with the eIFU requirements means redesigning existing business processes.

"Building a comprehensive eIFU system is a time-consuming and expensive task for medical device manufacturers," said Charlie Kim, Soom president and CEO. "At Soom, our patented platform makes eIFU compliance simple, cost-effective and futureproof. We also included first-to-market capabilities like mobile scanning and single-step language selection that go beyond compliance; these features bring to life the regulation's larger goal of improving patient engagement and safety."

The Soom eIFU solution integrates with manufacturers' product lifecycle management (PLM) and content management systems (CMS) to deliver the most recent and accurate instructions for use. This content is shared via public websites, mobile app and supported through 24-hour call centers and printed IFU fulfillment as mandated by the regulations.

Manufacturers who also opt to develop a mobile scanning application can either white label the Soom mobile app or embed the Soom software development kit (SDK) into an existing application.

"Our eIFU solution delivers on Soom's mission to use the power and efficiency of technology to improve patient safety and outcomes—for everyone," added Kim. "Like all that we do, this solution creates a great user experience and delivers the absolute most relevant information to the end user, all with a simple scan."

Medical device manufacturers that are interested in delivering eIFU to users from a mobile scan can learn more at www.Soom.com.

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SPECgpc releases Linux Edition of SPECviewperf 13 benchmark

13 March 2019

The SPEC Graphics Performance Characterization Group (SPECgpc) has released a Linux Edition of its SPECviewperf 13 benchmark. SPECgpc members include AMD, Dell, Fujitsu, HP, Intel, Lenovo and Nvidia.

The SPECviewperf 13 Linux Edition benchmark includes all the new features introduced in the Windows version last May, including new volume visualization viewsets for energy and medical applications, a redesigned GUI, improved scoring and reporting methods, and updated viewsets to support more recent versions of the applications on which they are based.

Reflecting real-world performance

SPECviewperf software measures the 3D graphics performance of systems running under industrystandard application programming interfaces (APIs). The benchmark's workloads, called viewsets, represent graphics content and behavior extracted from traces of professional applications.

Applications represented by viewsets in the SPECviewperf 13 Linux Edition include Maya for media and entertainment; Catia, Creo, NX and Solidworks for CAD/CAM; and two datasets representing professional energy and medical applications.

Major new features and upgrades in SPECviewperf 13 include:

-- Support for 4K resolution displays. -- New reporting methods, including JSON output that enables more robust and flexible result parsing. -- The new standard user interface being implemented across all SPEC/GWPG benchmarks. -- New workloads and scoring that reflect the range of activities found in real-world applications.

Same rigor as Windows version

Traces for the SPECviewperf 13 Linux Edition benchmark were obtained from the Windows versions of the applications represented in the viewsets. While this means the viewsets are not fully representative of native applications running on Linux, they still contain the same model complexity and rendering modes that exercise software and hardware layers in similar ways.

"We think this is the most compelling benchmark for measuring workstation graphics performance in the Linux ecosystem, with the same rigor and attention to detail as the Windows version," says Ross Cunniff, SPECgpc chair.

Available for immediate download

The new SPECviewperf 13 Linux Edition benchmark is available for free downloading to everyone except vendors of computers and related products and services that are not members of the SPEC Graphics and Workstation Performance Group (SPEC/GWPG). Non-member computer product and service vendors can purchase the benchmark for \$2,500. A SPECviewperf 13 license covers both Windows and Linux versions; current SPECviewperf 13 paid license holders can receive the Linux Edition free of charge.

Results from SPECviewperf 13 Linux Edition are comparable to those from the Windows version of SPECviewperf 13, but they should not be correlated to Linux application performance, since most of the applications represented by viewsets within SPECviewperf 13 do not run natively on Linux.

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Unity Technologies and NVIDIA Bring Real-Time Ray Tracing to Automotive, Media & Entertainment

18 March 2019

Unity Technologies announced it is working closely with NVIDIA to offer production-focused earlyaccess for real-time ray tracing in the High Definition Render Pipeline (HDRP) on April 4, with an optimized preview solution available for customers in the second half of 2019. Once thought impossible to achieve, performant real-time ray tracing delivers, via the NVIDIA RTX platform, photorealistic image quality and lighting for any task where visual fidelity is essential, such as for design, engineering, or marketing, at a fraction of the time of offline rendering solutions. The technology provides a key advantage to creators because it mimics the physical properties of light, allowing developers to make and dynamically alter creations that blur the line between real-time and reality.

"As part of our commitment to best-in-class visual fidelity graphics, we rolled out the preview of the High Definition Render Pipeline last year - a highly-optimized, state-of-the-art raster-based solution capable of achieving stunning graphics in real-time on consumer hardware. We built HDRP with the future in mind and today we're excited to announce that we are working with NVIDIA to adopt its RTX real-time ray tracing capabilities so we could bring this technology to all," said Natalya Tatarchuk, Vice

President of Graphics, Unity Technologies. "Real-time ray tracing moves real-time graphics significantly closer to realism, opening the gates to global rendering effects never before possible in the real-time domain."

To highlight what is achievable with real-time ray tracing, Unity and NVIDIA collaborated with the BMW Group to showcase the 2019 BMW 8 Series Coupe, recently lauded as "Design of the Year" by Automobile Magazine, in a demo called "Reality vs. Illusion: Unity Real-Time Ray Tracing." Rendered in real-time in Unity, viewers are shown a real car and a version of the car powered by Unity and NVIDIA; the dazzling array of lights and visual fidelity makes the vehicles indistinguishable from one another.

For situations that demand maximum photorealism and the highest visual fidelity, ray tracing provides reflections and accurate dynamic computations for global lighting. This more accurately demonstrates the physical properties of a surface and creates lights and shadows that mimic how they would appear in real life. Real-world applications for ray tracing within the automotive industry include the power to create and rapidly iterate on lifelike marketing stills and videos that are near-film quality. In engineering and design, real-time ray tracing's ability to faithfully recreate real-world materials and lighting scenarios unlocks the capabilities to identify design flaws, such as dangerous reflections or blind spots in a car's design, and address them before going into production.

"Until NVIDIA RTX, real-time ray tracing was perpetually on the horizon. Now millions of developers working in Unity can achieve amazing graphics with lightning speed," said Bob Pette, Vice President, Professional Visualization, NVIDIA. "Unity's plug-and-play resources for developers and popularity with brands large and small make its users a natural audience to take advantage of RTX ray tracing capabilities."

Unity exists to empower success of the world's creators with the most accessible and powerful real-time 3D development and monetization platform. Games and experiences made with Unity have reached more than 3 billion devices worldwide this year and were installed more than 29 billion times in the last 12 months. For more information on Unity's Automotive offerings, please visit the Unity for Automotive & Transportation Website.

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Vectorworks, Inc. Announces Lumion Live-Sync Rendering, Linked Panoramas and My Virtual Rig Advancements

19 March 2019

With the release of Vectorworks 2019 Service Pack 3 (SP3), global design and BIM software solutions provider Vectorworks, Inc. is continuing its commitment to quality and performance improvements, and introducing three new features that greatly improve presentation and visualization capabilities, along with overall workflow between products.

Experience the Power of Real-time Rendering with Lumion LiveSync

Many designers create artistic and photo-realistic renderings of their designs using Vectorworks' integrated rendering feature, Renderworks, while some designers also use the popular real-time rendering application, Lumion. To prioritize these varying needs, designers will enjoy a new live-sync rendering connection that allows designers to perform real-time rendering while making design changes

in Vectorworks software. The LiveSync plug-in is developed by Lumion and is the first partner plug-in to use a new Vectorworks Graphics Sync (VGS) API, created by Vectorworks. The VGS API provides live access to the Vectorworks 3D scene and enables third parties to connect Vectorworks to any 3D visualization engine imaginable.

"Lumion is highly respected in the AEC and landscape design industries and has been incredibly popular with our users as a stand-alone tool," said Dave Donley, director of product technology at Vectorworks. "Offering the live-sync rendering connection within our software shows our commitment to equipping designers with connections to the best tools, so they can easily and quickly complete their work while still providing top-notch quality presentations to their clients."

Lumion and the LiveSync plug-in are available on the PC, and the plug-in is available immediately for English language users on the Lumion website. Additional language options will be offered soon. Learn more about how LiveSync works in this <u>video</u>, and sign up for the upcoming <u>webinar</u> with Michael Brightman on April 11 at 2 p.m. ET.

"We're thrilled that Vectorworks users can now link with Lumion to immediately create a whole new level of sensorial experience in their 3D models," said Ferry Marcellis, CEO at Lumion. "We're confident that seeing the 3D model in a beautiful setting while simultaneously working on the design can open the door to a more productive, more enjoyable design and visualization experience for many Vectorworks users."

Immerse Clients in Your Design with Linked Panoramas

With SP3, a new Vectorworks Cloud presentation feature allows designers with an active Vectorworks Service Select membership to use Vectorworks Cloud Services to generate presentations of designs with an intuitive drag-and-drop interface. Presentations include interactive 360 rendered panoramas that can be linked together to create a holistic, immersive experience. This unique presentation capability helps communicate and connect your design ideas with your clients' expectations. Providing better communication among designers and clients, the feature allows the creation of a high-quality experience of a project's design and a shareable web link. This <u>video</u> showcases the Vectorworks Cloud presentation feature.

Discover a Better Way to Work

Lastly, a year ago Vectorworks — along with MA Lighting and Robe lighting — announced the creation of a new open file format called the General Device Type Format (GDTF), which has continued its development to support the needs of the entertainment design and production workflow. In line with that effort, the founding companies of GDTF have also created a file format called My Virtual Rig (MVR). The MVR file format creates a two-way connection between planning, previz and console systems that implement the support needed for a seamless workflow. The MVR format contains the 3D model, texturing, position information and GDTF information from the design in Vectorworks Spotlight. With SP3, Vectorworks has implemented import and export of MVR in Vectorworks Spotlight 2019 and import of MVR into Vision 2019, the previz software from Vectorworks. Now, entertainment designers are able to create a more efficient and connected workflow between design planning and previz, merging the iterative changes of the model between Spotlight and Vision without re-importing and redefining the performance cues each time. Watch the <u>video</u> to see the GDTF updates in action.

"Our release of Vectorworks 2019 Service Pack 3 is the perfect example of our focus on connecting quality features and improvements with the end goal of superior workflows," said Steve Johnson, vice president of product development. "With our forward-thinking methods and latest developments, we've

demonstrated our power of connecting design with innovative cloud and mobile features, as well as our dedication to offering robust live-rendering applications."

Enjoy Additional Quality and Performance Improvements

In addition to these great new features, SP3 also contains a number of additional performance improvements, including several fixes to compatibility with macOS Mojave and significant redraw speed enhancements with Space Objects.

This Service Pack is available as a downloadable updater for all U.S. English-based versions of Vectorworks 2019. To install, "Check for Updates" from the Vectorworks menu (Mac) or Help menu (Windows). To find out more about this release, read the <u>tech bulletin</u>. Contact tech@vectorworks.net with any technical questions.

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VMware Helps Customers and Partners Accelerate Their Cloud Journey to Drive Greater Cloud Outcomes and Opportunities

19 March 2019

VMware, Inc. announced advancements to VMware Cloud that further the company's vision for delivering the essential, ubiquitous Digital Foundation to support customers' and partners' digital transformation. These advancements include updates to VMware Cloud Foundation, VMware vCloud Director, and CloudHealth by VMware, and increased access to Cloud Foundation-based services via new VMware Cloud on AWS regions in Canada, Paris, and Singapore, and more VMware Cloud Verified partners globally.

Every organization is on a multi-cloud journey. This journey is being supported by two primary cloud strategies: hybrid cloud and native public cloud. While each approach is unique, they are complementary, and most often exist simultaneously within the same customer. Each path is intended to open new opportunities for a business in a way that is differentiating, and to deliver tangible business outcomes. Looking for the best path forward on this multi-cloud journey, VMware's research shows that 83 percent of cloud buyers are seeking consistent infrastructure and operations from the datacenter to the cloud(2).

"VMware is helping customers leverage the cloud to build, deploy and deliver the applications that drive their business, and no other vendor spans the cloud industry as broadly or as comprehensively as VMware," said Ajay Patel, senior vice president and general manager, cloud provider software business unit, VMware. "VMware provides customers the ability to operate in this multi-cloud reality, providing consistent infrastructure and operations to help them match the needs of applications to the best resources available, without compromise."

Delivering the Hybrid Cloud with VMware Cloud Foundation

VMware Cloud Foundation is the industry-leading solution for hybrid cloud that expands the definition of hyperconverged infrastructure (HCI) by unifying the essential cloud infrastructure capabilities of compute, storage, networking and integrated cloud management. Cloud Foundation is the only full-stack solution delivering consistent infrastructure and operations to help customers modernize their data centers; rapidly migrate applications and entire data centers to the cloud; scale on demand for disaster recovery, global expansion and seasonal spikes; and deploy next-generation applications in modern data

center environments.

Today, VMware announced VMware Cloud Foundation 3.7, which is expected to be available on Dell EMC VxRail in VMware's Q1FY20, offering customers the industry's first jointly engineered, hybrid cloud infrastructure stack integrated with VMware's flexible, full stack HCI architecture, ready for line-of-business applications. Cloud Foundation on VxRail demonstrates the tight integration between Dell EMC and VMware, incorporating unique, jointly-engineered features that simplify and streamline operations, and deliver full stack, end-to-end lifecycle management, through an automated hardware-through-software management experience. Optimized for performance, scalability, user experience and TCO savings, Cloud Foundation on VxRail can lower capital and operational costs while providing unrivaled resiliency, predictability and ease of deployment. New networking flexibility and integration, as well as deployment options including appliance and integrated rack offerings give customers flexibility when choosing Cloud Foundation on VxRail.

"Demonstrating the strength of Dell Technologies, this unique integration between Dell EMC VxRail and VMware Cloud Foundation builds on the history of co-engineering to offer our customers an experience unlike any other infrastructure running VMware Cloud Foundation," said Gil Shneorson, senior vice president and general manager, Dell EMC VxRail, "With this combination, we have enabled the fastest, simplest and most seamless way to deploy and operate a hybrid cloud with VMware."

Additionally, the new Cloud Foundation 3.7 release supports fully automated deployment of VMware Horizon 7 virtual desktop infrastructure (VDI). Cloud Foundation accelerates the delivery of Horizon 7 benefits by providing complete infrastructure automation for Horizon 7 environments, including the installation of Horizon 7, App Volumes, User Environment Manager, and Unified Access Gateway. Cloud Foundation couples ready-to-use infrastructure with line-of-business application deployment, enabling customers to deliver infrastructure and applications to business customers at the speed of cloud.

Cloud Foundation is the foundation for cloud infrastructure as a service from VMware and VMware Cloud Verified partners as well as forthcoming VMware managed SDDC as-a-service offerings for onpremises and the edge. Today, VMware announced the expanded global availability of Cloud Foundation-based services from VMware and its partners, including:

More VMware Cloud on AWS Regions: VMware Cloud on AWS is powered by Cloud Foundation, and is delivered, sold and supported by VMware and its partners. With the addition of the AWS Canada (Central), AWS EU (Paris), and AWS APJ (Singapore) regions VMware Cloud on AWS is now generally available in 13 AWS regions globally. VMware and AWS continue to work to bring the service to major AWS regions worldwide by the end of calendar year 2019.

More Partners Offering Services for VMware Cloud on AWS: there are more than 60 partners building or delivering managed service offerings for VMware Cloud on AWS, and more than 280 partners have achieved the VMware Cloud on AWS Solution Competency, less than one year from the launch of the VMware Cloud on AWS partner program.

More VMware Cloud Verified Partners: VMware now has 35 VMware Cloud Provider Program partners that have achieved Cloud Verified status. VMware Cloud Verified partners are a set of strategic partners offering a complete VMware SDDC as a service as well as value-added services and support from their data centers via Cloud Foundation. The Cloud Verified trust mark gives enterprises confidence their cloud provider offers the most complete and advanced VMware technologies, with consistent infrastructure and operations across clouds.

Powering New VMware Cloud Provider Service Offerings

Collectively, VCPP partners serve more than 150,000 customers with millions of VMs deployed. These customers benefit from a robust, differentiated set of enterprise-class clouds using the latest VMware innovations to simplify hybrid cloud adoption and management with consistent infrastructure and new cloud services.

The new VMware vCloud Director 9.7 release will allow cloud providers to further differentiate their hybrid cloud offerings and deliver new services through centralized global cloud management, expanded scalability, and an enhanced extensibility framework. The vCloud Director platform will unify private and multi-tenant cloud management across a cloud provider's global footprint of VMware-based environments, simplifying monitoring and management from on-premises vSphere environments to multi-tenant provider clouds. The updated extensibility framework will enable cloud providers to offer new, differentiated services on their multi-tenant platform from industry-leading third-party solutions from ecosystem partners such as Cohesity, Dell EMC and Rubrik.

The new VMware vCloud Availability 3.0 will unify onboarding, migration and disaster recovery services to and between multi-tenant clouds, helping cloud providers offer new availability services with compelling economics. The native integration with vCloud Director and a modern user interface will provide a simple customer experience for rapid service delivery and management.

Accelerating Cloud Success with CloudHealth By VMware

Enterprises turn to the cloud for its promise of agility, security and faster time to market, but all too often cost challenges derail these efforts and prevent businesses from capitalizing on the cloud's full potential for transformation. With more than 4,000 customers, CloudHealth by VMware enables customers to manage, operate and better secure their multi-cloud environments. With CloudHealth, customers collaborate across lines of business to make intelligent decisions related to cost management, security, and governance while scaling their multi-cloud environments. CloudHealth delivers next-generation cost management capabilities that can increase return on investment in cloud by showing customers where budgets are spent, which applications consume the most resources, and how to right size their environments – even as they rapidly scale.

New features in CloudHealth will expand on the platform's robust cost management functionality, and will include enhanced multi-cloud reporting, multidimensional reporting, workspaces reporting, enhanced amortization, convertible Reserved Instance (RI) exchanger automation, container cluster visibility, and cross-family rightsizing for Amazon EC2. Additionally, the CloudHealth platform now integrates with the Wavefront by VMware cloud analytics and monitoring platform. Through this integration, CloudHealth customers can access Wavefront cloud performance metrics via their CloudHealth platform for rightsizing and performance optimization via a business lens. By using CloudHealth and Wavefront together, CloudHealth takes advantage of Wavefront's vast real-time, highly granular, multi-cloud (AWS, Azure, GCP) infrastructure usage metrics, and provides effective recommendations for cost savings to customers.

Customer Commentary

"HM Health Solutions is a Pennsylvania based IT Service Provider that delivers business solutions to health plan payers serving over 10 million members. To serve our customers, we give access to our inhouse Windows applications to external customers through VDI running on VMware Cloud Foundation," said Joe Elliott, Manager, VDI Services, HM Health Solutions. "With VMware Cloud Foundation, we have a scalable and consistent hyperconverged infrastructure that supports anywhere from 10-12 thousand virtual desktops in an active-active environment across multiple data centers. Cloud Foundation enables us to spin up new customer environments in as little as two hours where it used to take days, and we now have a much more resilient architecture. Most importantly, the automated lifecycle management enables us to simply click a button and patch our entire infrastructure stack, which is amazing."

"VMware Cloud on AWS was a perfect fit for us when we made the decision to move to a new cloud environment," said John Meyer, Chief Information Officer, United Way of Massachusetts Bay and Merrimack Valley. "Getting the initial set up took just a few hours, and our entire environment was up and operational in just 3-4 weeks with zero downtime. This was critical as our small IT team had to migrate clouds during our high season of donations. We particularly like that we can manage our cloud environment through the vCenter portal and that we can access native AWS services. By moving to VMware Cloud on AWS we also now have a more highly available and more secure environment, and a better disaster recovery strategy."

"Coinstar is one of the world's largest fully automated networks of self-service kiosks for converting change into cash, e-gift cards or charitable donations," said Jason Friedlander CTO, Coinstar. "Working with Rackspace, VMware Cloud Verified partner, we successfully migrated thousands of VMs off legacy systems to a modern Rackspace-managed software-defined data center environment based on Cloud Foundation in less than five months, improved business operations and reduced IT costs. We estimate Coinstar is saving 40 percent over our previous spend in our legacy colocation environment with a lot of other pluses to our partnership. In addition, our elastic virtualized infrastructure has allowed us to grow internationally and launch new products."

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