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Company News

Accenture and Snam: Launch of a Collaboration in IOT Technologies For the Innovation and Sustainability of Energy Networks

27 November 2019

Accenture and Snam, one of the world's leading energy infrastructure companies, have signed a memorandum of understanding to study and assess solutions based on Internet of Things (IOT) technologies to boost innovation and sustainability of energy networks as part of the global strategic push towards an energy transition.

The collaboration is part of a broad initiative by Snam — dubbed "SnamTec, Tomorrow's Energy Company" — that calls for investments of over €1.4 billion in innovation and energy transition by 2023

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involving everything from the application of new technologies to increase the networks' sustainability to a commitment to green sectors such as sustainable mobility, renewable gas, hydrogen and energy efficiency.

Accenture and Snam will research and assess solutions for internet-connected devices and other technologies — such as machine learning and artificial intelligence, edge and fog computing and advanced analytics — to optimize the monitoring and maintenance of infrastructure to make it smarter and more sustainable, generating a positive impact on surrounding regions and communities.

Another objective of the collaboration will be to carry out analyses on the growing role of renewable gases such as biomethane and hydrogen on the energy mix of the future.

“The right digital strategy is critical to achieving a low-carbon future, increasing safety and building community engagement,” said Accenture’s CEO Julie Sweet. “Snam is an industry leader, and this initiative represents an exciting new chapter in our long and trusted relationship. We look forward to co-developing solutions with Snam to help them — and the industry — accelerate innovation and increase sustainability.”

Marco Alverà, Snam’s CEO, said: “Innovation is a pillar of the SnamTec project, with which we are laying the foundations for the energy company of the future, including through agreements with international firms such as Accenture. The aim is to make our network increasingly modern, sustainable and integrated with local regions and communities, using innovative systems like IOT to facilitate system maintenance and reduce emissions. Thanks to our commitment to innovation, with our new plan we expect to reduce methane emissions by 40% by 2025 and CO2 equivalent emissions by 40% by 2030.”

Accenture Italia’s Chairman and CEO Fabio Benasso added, “Over the years we have built a strong business relationship with Snam that has allowed us to achieve ambitious goals both nationally and internationally. We will continue to provide them with our energy industry expertise and technology capabilities to support them in the complex process of shifting to a more modern, prosperous, competitive, and climate-neutral economy.”



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Markforged and MSC Software Partner to Provide Simulation and Performance Tools to Customers

26 November 2019

Markforged and MSC Software Corporation(MSC),announced a technology partnership to deliver process simulation, performance modeling, and material analysis tools for Markforged 3D printers.

Customers can already implement material analysis for the Markforged continuous carbon fiber and Onyx materials within MSC’s Digimat materials modelling software, and the cooperation will soon extend to provide full-process simulation and part performance with Finite Element Analysis (FEA) within a common CAE environment.

“Markforged is a pioneer in the 3D printing space, and its continuous carbon fibre material is so strong, it’s replacing aluminium in factories across the globe,” said Olivier Lietaer, Business Development Engineer for Additive Manufacturing at e-Xstream Engineering, part of MSC. “This shift in design and

manufacturing requires new analysis capabilities that can validate customer designs with the same confidence as traditionally manufactured parts. Because it applies data specific to printing conditions, Digimat gives customers 100% confidence that their part designs can be 3D printed, making additive manufacturing accessible to applications that require rigorous testing. Together, Markforged and MSC enable customers to guarantee the performance of a part from its material properties through to final part strength and weight.”

Danfoss Power Solutions is a global industry leader in providing mobile hydraulics and a complete range of energy-efficient and intelligent hydraulic, electronic, and electrical solutions for the construction, agriculture, and other off-highway vehicle markets. It is one of many customers excited about the partnership:

“We’ve been using Markforged metal and carbon fiber printers for more than a year now, and they’re invaluable. We invested mostly with tooling in mind, and it’s simplified and optimized our supply chain process for replacing fixtures at a much lower cost than machining,” said Jeff Herrin, Vice President Research & Development, Danfoss Power Solutions. “But we wanted to identify more applications for 3D printing and validate the performance of our parts before they’re printed. The company’s partnership with MSC will not only demonstrate that their composite parts can replace metal, but also help identify a part’s top potential. Simulating the ideal weight, ideal cost savings, and ideal lead times with MSC will help us reduce our time and material usage so we can just print and deploy.”

Recent advances in additive manufacturing, such as reinforced continuous fiber routing, are extending 3D printing use cases to structural parts that bear heavy loads. However, these structural applications often require pre-validation at the design level to ensure performance and safety requirements can be met. Danfoss printed a lifting bracket with Markforged to lift cast housings in an assembly process. Given the suspended loads and the proximity of workers, validation is needed to ensure safe working conditions. With MSC and Markforged’s partnership, the simulation workflow has been validated on the bracket and the failure area has been identified. The results show a significant safety margin that validates that the lifting bracket can be safely deployed in operations and further offers an opportunity to reduce mass and cost.

Material Engineering – MSC and Markforged clients can access digital material cards that capture the mechanical and material properties of Markforged’s continuous fibers and chopped fiber-filled plastics.

Process Simulation – Clients will be able to model 3D printing within the MSC software. They will also be able to establish print calibration standards, ensure each machine is optimized for the part, and make sure each part is printed accurately the first time.

Part Performance – Customers will be able to connect the Markforged material and print information with FEA simulation from MSC. They can run simulations on proposed designs containing continuous fibers and printed thermoform plastics to predict the parts’ mechanical and structural performance.

“We’re thrilled to work with a leading provider of composite modeling and simulation software to provide this service to our customers. MSC’s best-in-class composites FEA will be critical in helping our customers identify the right design for their carbon fiber parts,” said Jon Reilly, VP of Product, Markforged. “3D printing is transforming the factory floor, and with MSC as our partner, we can ensure all parts made with Markforged will perform at their peak potential.”



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MathWorks Boosts Support for Scientific Research with Updated Access Model for MATLAB and MATLAB Parallel Server

25 November 2019

MathWorks announced expanded access to MATLAB and MATLAB Parallel Server to accelerate scientific research and enable collaboration. Today, more than a thousand universities and top research centers around the world offer their own researchers, faculty and students open access to MATLAB and MATLAB Parallel Server. The updated access model has two advantages – first, academic collaborators of these institutions may use the institute MATLAB and MATLAB Parallel Server licenses, facilitating collaboration and reproducibility of research. Second, these academic users with open access will be also able to speed up their research by taking advantage of unlimited access to scale MATLAB programs and Simulink simulations with MATLAB Parallel Server.

With the new usage model, academic and research institutions may now provide MATLAB and MATLAB Parallel Server access to professors, students, and academics outside of their institution when they are provided credentials to access the institution infrastructure. Research and high-performance computing (HPC) centers can now facilitate virtual research environments by extending access to their communities of collaborators without the additional overhead and complexity involved in the traditional bring-your-own-license approaches. Collaborators can run on the platform that works best for them and still have access to common data.

MATLAB Parallel Server enables researchers to run their algorithms and models on clusters and clouds through the familiar MATLAB environment and without algorithm changes. Previously, researchers could only scale to the number of MATLAB computational engines they had on their MATLAB Parallel Server license. Now, researchers with access to an institution-wide MATLAB Parallel Server license can solve larger problems by running an unlimited number of simultaneous MATLAB computational engines on clusters or on clouds such as Amazon Web Services and Microsoft Azure.

“Research has been the backbone of innovation and, as these projects become more complex, researchers need the ability to collaborate and scale to be truly successful,” said Silvina Grad-Freilich, head of HPC marketing, MathWorks. “We believe that offering simplified collaboration and unlimited scaling helps us to best meet this increasing need for parallel computing capabilities and joint working opportunities.”

The extended access to scaling and collaboration is offered with all releases of MATLAB Parallel Server, including earlier versions of the product under its previous name of MATLAB Distributed Computing Server.



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Mocana joins forces with Siemens to Secure the IIOT

25 November 2019

Mocana Corporation announced a new partnership with Siemens Digital Industries Software to bring Mocana’s end-to-end security capabilities to any Industrial Internet of Things (IIoT) devices using MindSphere®, the cloud-based, open IoT operating system from Siemens. Mocana is the leading provider of self-defending cybersecurity solutions for IIoT devices that ensure that those devices function as designed and deliver accurate data. MindSphere connects products, plants, systems, and machines, enabling businesses to harness the wealth of data generated by the Internet of Things (IoT) with advanced analytics.

Mocana will integrate TrustPoint™, its on-device security software that protects IIoT endpoints, and TrustCenter™, a security orchestration platform for managing the security lifecycle of these IIoT devices, with MindSphere. This will make any IIoT endpoint deployed with TrustPoint tamper-proof and will provide secure connectivity between the endpoint and Siemens' MindConnect® hardware to connect to MindSphere - a device for collecting data using different protocols that then transfers data securely to MindSphere.

“Mocana is a recognized world-leader in their ability to protect IIoT devices from the inside out. We are excited that customers can now leverage Mocana's ability to provide end-to-end security for IIoT devices connected to MindSphere,” said Florian Beil, Head of MindSphere Sales and Partners, Siemens Digital Industries Software. “The combination of Siemens' deep industrial IoT domain knowledge with Mocana's deep IIoT device security expertise is a powerful step forward for our mutual customers.”

“Industrial manufacturers are adopting Industrial IoT (IIoT) devices to connect sensors and industrial systems to virtualize the entire production line,” said Dean Weber, CTO of Mocana. “This increase in connectivity provides additional insight into the performance and reliability of systems to improve asset performance, minimize downtime, and reduce maintenance costs. Unfortunately, it also introduces new cybersecurity risks and ways for hackers to attack control systems to compromise their safety and uptime – and generate inaccurate data.”

This collaboration can further enhance Mocana's ability to address the security issues associated with industrial IoT.

Mocana's TrustPoint software can be installed on IIoT device that has computational capabilities and network connectivity to harden devices and establish them as tamper-proof, while providing secure connectivity between those same devices and Siemens' MindConnect hardware.



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Oerlikon AM and Siemens collaborate to digitize additive manufacturing

26 November 2019

Oerlikon AM, the additive manufacturing unit of technology group Oerlikon, and Siemens AG have created a strategic agreement in which Siemens will provide Oerlikon AM with digital enterprise technology that will help Oerlikon accelerate the industrialization of additive manufacturing (AM).

The integration of Siemens' Digital Enterprise Portfolio into Oerlikon's software landscape in its AM production and R&D sites will support Oerlikon in actively managing the AM engineering process from end to end using one interface, the companies state. The technology includes software for engineering, as well as product life cycle management.

The long-term objective is to create a digital factory in which Oerlikon AM can see the impact of change in any part of the process, from material selection to engineering design to printing and post-processing, and adapt accordingly.

“At the moment we have a variety of special tools that we use for different steps of the value chain,” said Dr. Sven Hicken, head of Oerlikon's additive manufacturing business unit. “Developing a more integrated system that gives us increased visibility and puts all of our manufacturing sites on the same page will allow us more flexibility and speed in responding to customer requests. We expect this to lead to more rapid progress in integrating additively manufactured parts into series production.”

The two companies will begin by focusing on tools used in the engineering part of the AM process. The project is expected to take about two years to complete, but individual modules will go into operation as

completed.

“Oerlikon has extensive expertise in the additive manufacturing process. We know we can learn from them and are excited by the opportunity to use our technology to enhance their productivity,” said Dr. Karsten Heuser, vice-president, additive manufacturing, Siemens Digital Industries. “Working together, we believe we can make a major impact on industry’s adoption of AM.”



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Sungkyunkwan University in South Korea to Establish Trimble Technology Lab for Architecture, Engineering and Construction

27 November 2019

Sungkyunkwan University (SKKU) in South Korea has received a gift from Trimble to establish a state-of-the-art Technology Lab for architecture, engineering and construction (AEC). The lab will expand the university's training and research in 3D building design, digital fabrication and sustainable built environment.

SKKU will incorporate Trimble's portfolio of Building Information Modeling (BIM) solutions into a variety of courses including architectural and engineering design and construction management and information related subjects. In addition to courses, the Trimble Technology Lab will be used within SKKU's Graduate School of Convergence Engineering for Future City. The graduate program is expected to make a significant contribution to the development of talent with smart city expertise.

Trimble's broad portfolio of building construction solutions support the Constructible Process, Trimble's innovative approach for enabling digital transformation of AEC workflows. This process empowers disparate teams across the construction lifecycle with actionable data to improve productivity and reduce waste.

The Trimble Technology Lab will benefit students enrolled in the School of Civil, Architectural Engineering and Landscape Architecture who will have hands-on experience with Trimble solutions. Applications of these solutions range from processing scanning data, conceptual design and 3D printing of architectural building models, BIM in structural 3D design, engineering, and analysis of civil and building structures to implementing construction cost estimating and scheduling to improve productivity and reduce costs.

"Our mission in transforming the AEC industry requires that we invest in aspiring designers, architects, contractors, engineers, geospatial and trade professionals by driving awareness of, and access to, industry-leading solutions for training and research," said Allyson McDuffie, director of Education & Outreach at Trimble. "We're thrilled to be supporting SKKU in advancing their educational programs to help develop future BIM in AEC leaders, entrepreneurs and industry innovators."

"We're very excited to work with Trimble and initiate BIM-based education and research in cooperation with Trimble," said Dr. Ick-Tae Yeom, head of the School of Civil, Architectural Engineering & Landscape Architecture at SKKU. "Opening a Trimble Technology Lab will help us build a smart

construction education program and achieve future-oriented educational performance through integrated Information and Communications Technology (ICT)-based solutions in the stages of planning, design, engineering, construction and maintenance. It will provide students with training opportunities in the latest digital technologies in building design and construction."

The lab will include a broad range of Trimble's industry-leading software such as the Trimble® Vico Office Suite for design, RealWorks® scanning software, Trimble Business Center, Tekla® Structures, Tekla Structural Designer, Tekla Tedds, Trimble Connect and the company's popular 3D modeling software, SketchUp Pro.

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TCS -New Report Sheds Light on Manufacturers' Digital Transformation Journeys

25 November 2019

Tata Consultancy Services in association with Harvard Business Review Analytic Services, has released a new thought leadership report, 'Manufacturing Next: Intelligent, Agile, Automated, and Cloud-Enabled' that brings together insightful perspectives on the nature of the digital transformation that manufacturers are going through.

The report draws qualitative insights from academic experts who specialize in manufacturing, leading manufacturers, and analyst reports. According to the report, manufacturers have shifted focus from operational efficiency to customer centricity and lifecycle services, from traditional products to smarter ones, and from conventional B2B approaches to a more involved B2B2C model. It goes on to say that this shift requires an appetite to embrace the risk that comes with disrupting the business, significant investment, change management, and new skills and talent. Leading manufacturers are embracing digital transformation and updating their business models to stay ahead of competition.

"As traditional manufacturing firms get ready to battle with new age businesses, there is a need for them to reconstruct the traditional linear value chain into an integrated collaborative ecosystem model," said Susheel Vasudevan, Global Head, Manufacturing and Utilities Business Group, TCS. "As a partner to some of the world's leading manufacturers, including several Fortune 500 enterprises, we are seeing this change from close quarters as we participate in their transformation and help them embrace technology-led business innovation. The TCS Business 4.0™ thought leadership framework is acting as a beacon, providing guided redirection of energy to embrace risk, and balance the business models to achieve targeted outcomes."

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Events

Eurostep Webinar Dec 12 - Take control over the shared data in your supply chain using ShareAspace cloud.

27 November 2019

A few weeks ago, Eurostep launched its very first cloud offering on ShareAspace, primarily targeting Design to Manufacturing in SMEs with partners, but also niche processes in large organizations.

On 12th of December 2019 at 4pm CET, Magnus Färneland – our Director of Software Product; and Mathias Gustafsson – our Product Communication Team Manager; are going to run an in-depth live

demo of ShareAspace cloud capabilities for the Build to Print process. They will follow up on the launch webinar by demonstrating in more detail how ShareAspace cloud can revolutionize the way you share product data with your supply chain. Effortlessly share your product data with one or more suppliers by using ShareAspace cloud. Acquire more control over your project development and decrease your lead times for faster product delivery. For more information, visit Eurostep.com

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Financial News

Autodesk, Inc. Announces Fiscal 2020 Third Quarter Results

27 November 2019

Autodesk, Inc. reported financial results for the third quarter of fiscal 2020.

All growth rates are compared to the third quarter of fiscal 2019 unless otherwise noted. A reconciliation of GAAP to non-GAAP results is provided in the accompanying tables. For definitions, please view the Glossary of Terms later in this document.

Total ARR increased 28 percent to \$3.22 billion;

Total billings increased 55 percent to \$1.01 billion;

Total revenue increased 28 percent to \$843 million; recurring revenue represents 96 percent of total;

GAAP operating margin was 13 percent, up 11 percentage points;

Non-GAAP operating margin was 27 percent, up 13 percentage points;

GAAP diluted EPS was \$0.30; Non-GAAP diluted EPS was \$0.78;

Cash flow from operating activities was \$276 million; free cash flow was \$267 million.

"Our strong performance continued in Q3 as revenue, billings, ARR, earnings and free cash flow came in above expectations," said Andrew Anagnost, Autodesk president and CEO. "We continue to demonstrate the cash generating power of our business model, and this quarter drove a record last twelve months free cash flow of nearly \$1 billion. The breadth and depth of our product portfolio in Construction paved the way for another strong quarter. In Manufacturing, we continue to displace competitors and grow faster than the overall market."

"Third quarter results were driven by all regions and products, and once again drove robust margin expansion," said Scott Herren, Autodesk CFO. "Outstanding execution, our resilient subscription business model and steady demand for our products produced billings over \$1 billion, a 55 percent year-over-year growth."

Third Quarter Fiscal 2020 Financial Highlights

Total ARR was \$3.22 billion, an increase of 28 percent as reported, and on a constant currency basis. Acquisitions from the fourth quarter of last year contributed \$113 million or 4 percentage points of the growth. On a sequential basis, total ARR increased 5 percent as reported, and 6 percent on a constant currency basis.

Subscription plan ARR was \$2.86 billion, an increase of 49 percent as reported, and 50 percent on a

constant currency basis. Acquisitions from the fourth quarter of last year contributed \$113 million or 6 percentage points of the growth. On a sequential basis, subscription plan ARR increased 8 percent as reported, and on a constant currency basis. Subscription plan ARR includes \$597 million related to the maintenance-to-subscription (M2S) program.

Maintenance plan ARR was \$365 million, a decrease of 39 percent as reported, and 40 percent on a constant currency basis. On a sequential basis, maintenance plan ARR decreased 12 percent as reported, and on a constant currency basis.

Core ARR increased 23 percent to \$2.99 billion. On a sequential basis, core ARR increased 5 percent.

Cloud ARR increased 164 percent to \$232 million. Acquisitions from the fourth quarter of last year contributed \$113 million or 128 percentage points of the growth. On a sequential basis, total cloud ARR increased 12 percent.

Total billings increased 55 percent to \$1.01 billion.

Total revenue was \$843 million, an increase of 28 percent as reported, and on a constant currency basis. Acquisitions from the fourth quarter of last year contributed \$29 million or 4 percent of the growth.

Net revenue retention rate was within the range of 110 to 120 percent.

Total recurring revenue in the third quarter was 96 percent of total revenue, consistent with the third quarter last year.

GAAP operating income was \$111 million compared to \$15 million in the third quarter last year. GAAP operating margin was 13 percent, up 11 percentage points.

Total non-GAAP operating income was \$225 million compared to \$92 million in the third quarter last year. Non-GAAP operating margin was 27 percent, up 13 percentage points.

GAAP diluted net income per share was \$0.30, compared to GAAP diluted net loss per share of \$(0.11) in the third quarter last year.

Non-GAAP diluted net income per share was \$0.78, compared to non-GAAP diluted net income per share of \$0.29 in the third quarter last year.

Deferred revenue increased 35 percent to \$2.42 billion. Unbilled deferred revenue was \$549 million, an increase of \$99 million compared to the third quarter of last year. Remaining performance obligations (RPO), or the sum of total billed and unbilled deferred revenue, totaled \$2.97 billion, an increase of 32 percent. Current RPO totaled \$2.05 billion, up 23 percent.

Cash flow from operating activities was \$276 million, an increase of \$237 million compared to the third quarter last year. Free cash flow was \$267 million, an increase of \$240 million compared to the third quarter last year.



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Implementation Investments

Boras Energi och Miljö AB Digitalises Asset Management with Infor CloudSuite EAM

25 November 2019

Infor announced that Borås Energi och Miljö AB, a Sweden-based renewable energy and recycling

company, has selected Infor CloudSuite EAM (enterprise asset management). Deployed and supported by Infor partner Prevas, the solution will support a completely new \$3.8 million wastewater, power and heating, and biogas facility in Sobackan, Sweden.

The level of investment and innovation channelled into the new plant, as well as its scale and complexity, meant that effective maintenance of the assets was imperative. With a combined heating and power plant supplying residents with remote heating and wastewater facility, downtime simply isn't an option. Borås Energi och Miljö AB therefore required a solution that would not only support condition monitoring but preventative maintenance, too.

Infor and Prevas were selected from a shortlist of four providers, based on the best-in-class capabilities of the platform, as well as its user friendliness.

"Having showcased Infor CloudSuite EAM on two occasions, early feedback from Borås Energi och Miljö highlighted the mobility and user-friendliness of the system as impressive," comments David Bäckström, sales executive for EAM at Prevas. "The team particularly liked that all interfaces are fully configurable based on the various roles or people working with the solution."

"It's always fun working with customers who are at the forefront of technology, and we're very happy that Prevas was chosen to provide Infor CloudSuite EAM to Borås Energi och Miljö AB," he continues.

"Our decision to deploy Infor EAM was based on a recent merger of two organizations, as we wanted to avoid having two maintenance systems," says Andreas Ulveström, head of maintenance at Borås Energi.

"We also wanted to refine our processes and working practices. During the demonstrations and procurement phase, Prevas showed us a powerful, user-friendly system in Infor CloudSuite EAM, with an attractive, intuitive interface. Prevas' deployment model was robust and highly professional and, as a result, we're hoping to have a system that both supports and streamlines our work."

"Any industry that invests heavily in equipment risks downtime and losses to the bottom line if assets are not managed properly," comments Johan Made, Infor SVP & GM of North, East & Western Europe. "Innovation and efficiency are at the heart of Borås Energi's business, and when it comes to its assets, Infor CloudSuite EAM facilitates the productivity and lifecycle management to help optimize all aspects of their performance."



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Impresa Pizzarotti & C. Spa Embraces Digital Transformation with Infor

26 November 2019

Infor announced that Italian civil engineering and construction leader Impresa Pizzarotti & C. Spa, has selected an Infor enterprise software suite based around Infor LN. The suite for 700 users incorporates enterprise resource planning (ERP), enterprise asset management (EAM) and analytics (Birst) capabilities, and will support Impresa Pizzarotti & C. Spa's digital transformation strategy. With a focus on consolidating processes to boost visibility and enhance forecasting, the strategy is designed to support expansion into new emerging markets and cement Impresa Pizzarotti & C. Spa's position in existing territories.

Impresa Pizzarotti & C. Spa selected Infor based on both the capabilities of the software and its ability to scale for future growth. Crucial to the decision was Infor's ability to facilitate best practices in corporate governance, risk management and reporting, as well as tight cost control across every customer project to support reporting and planning.

“Our digital transformation strategy is intrinsic to Impresa Pizzarotti & C. Spa’s expansion into new markets, and Infor will form a fundamental part of this,” comments Augusto Lambertino, group IT director at Impresa Pizzarotti & C. Spa. “Through reducing manual processes and streamlining operations — from tighter cost control on projects to shared reporting and enhanced financial visibility across the whole organisation — we are in a strong position to meet our current and future goals and consolidate our reputation for quality and service in the industries we serve.”

“The scale and complexity of Impresa Pizzarotti & C. Spa’s business means that adopting common processes and centralising reporting are imperative to establishing a foundation for expansion,” comments Laurent Jacquemain, Infor vice president for Southern Europe. “With construction projects spanning rail, roads, ports and hospitals, having a means of consistently tracking costs and feeding these back into planning is key to managing both service and profitability. Impresa Pizzarotti & C. Spa’s decision to invest in ERP, EAM and analytics capabilities from Infor will afford it the visibility to make the very best decisions on its future direction.”



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Konvekta Fosters Sustainable Production with Infor

25 November 2019

Infor announced that Konvekta AG is deploying Infor CloudSuite Automotive. The global vehicle air conditioning and cooling systems manufacturer aims to make its production more environmentally friendly. Sustainable technologies and ecological materials play an important role for the company. Thanks to Infor CloudSuite Automotive and its integrated end-to-end processes, Konvekta can now focus on driving electric mobility through innovative thermal management.

Konvekta AG was founded in 1957 by Carl H. Schmitt in Schwalmstadt (state of Hesse, Germany), and started producing automotive air conditioning and cooling systems just four years later. Since then, the company has become a global manufacturer of innovative and future-oriented air conditioning and cooling systems for commercial vehicles of all kinds, including buses, construction and agricultural machinery as well as rail and refrigerated vehicles. In addition, Konvekta focuses on leveraging sustainable technologies and environmentally friendly resources for its manufacturing processes at its six branches worldwide.

Konvekta decided to migrate from the previous Infor LN on-premise ERP solution to the Infor cloud-based application due to the solution’s strong automotive industry-specific focus as well as its flexibility and agility to deliver the manufacturer’s special requirements. Infor CloudSuite Automotive is designed specifically to meet the needs of automotive suppliers. It optimizes the core areas of product and program management, supply chain and procurement, manufacturing and global finance management, and is ideally suited to increase the company’s performance. It supports Konvekta by producing ecological climate systems. It also supports the outsourcing of production, new unit development as well as the creation of joint ventures.

With Infor CloudSuite Automotive, Konvekta can focus on rolling out its new CO2 heat pump system series. Thus, the company focuses on electromobility and provides an ecologically valuable and particularly economical thermal management.

“Infor CloudSuite Automotive supports our global activities 24/7 and offers us more transparency in the supply chain,” says Marco März, CEO of Konvekta. “Through providing advanced, innovative procurement tools at low prices and better scheduling of all processes, Infor helps us sustainably

optimize many processes and meet the needs of the market.”

“Konvekta offers an extensive range of high-quality products and can use our Infor CloudSuite Automotive extended applications ideally in production planning and manufacturing,” says Jörg Jung, Infor managing director of Central and East Europe. “We are proud to support sustainable production with our solutions and thus help protect the environment.”

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Petrol Industries Bolsters Growth Strategy with Centric Fashion PLM

26 November 2019

Petrol Industries, the Dutch denim fashion brand, has selected Centric Software’s Product Lifecycle Management (PLM) solution. Centric Software provides the most innovative enterprise solutions to fashion, retail, footwear, outdoor, luxury, consumer goods and home décor companies to achieve strategic and operational digital transformation goals.

Petrol Industries was founded in the Netherlands in 1989. Originally selling leather belts, Petrol Industries has expanded to an all-round fashion brand with over 3,500 points of sale across Europe, focused on denim craftsmanship, perfect fit and a great eye for detail.

Petrol Industries is going through rapid growth and decided to invest in a PLM solution to centralize product data and improve communication.

“We were working with spreadsheets, emails, filesharing, phone calls and other disconnected data, which caused difficulties with tracking information and lost productivity,” explains Kevin Klarenbeek, IT Manager at Petrol Industries. “We wanted internal teams and suppliers to collaborate in the same tool in real time, improving efficiency and consistency from design to delivery.”

After reaching out to Centric Software, Petrol Industries selected Centric Fashion PLM.

“Centric is the PLM market leader, and we were impressed by their industry expertise and project approach,” says Klarenbeek. “They have solid reference cases, a clear roadmap and validated ROI in their project proposal. Centric Fashion PLM’s extended functionality, Adobe® Illustrator integration, mobile apps and supplier connection portal are exactly what we’re looking for.”

“We chose Centric Fashion PLM to help us reduce operational costs as we can do more in less time and improve logistics planning, leading to a faster time to market,” he continues. “With more insight into the composition of collections, we can better predict quantities needed, negotiate prices and conditions more effectively and reduce the chance of late deliveries.”

“We are eager to grow into strategic business partners that help each other overcome challenges,” he concludes.

“We are delighted that Petrol Industries has selected Centric Fashion PLM,” says Chris Groves, President and CEO of Centric Software. “Petrol Industries is developing strategically with Centric’s innovative technologies as a digital foundation, and we are thrilled to partner with them.”

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Wartsila Creates First 3D Printed CE-Certified Lifting Tool

26 November 2019

Markforged announced Wärtsilä — a leading technology group servicing the marine and energy markets has achieved a breakthrough with the development of a 3D printed composite lifting tool for its engines

by using Markforged additive manufacturing technology. The tool has been designed, produced, and tested by Wärtsilä in its premises using the company's Additive Manufacturing Network. The testing procedure was carried out in collaboration with international certification agency Bureau Veritas who has granted the tool Type Approval certification.

In order to service engines found in the field or in the factories, Wärtsilä's teams often rely on custom lifting tools to move immensely heavy engine parts such as pistons. Traditionally, those tools are forged out of solid steel and are expensive, time-intensive to manufacture, and too heavy to easily use or transport. The team turned to Markforged 3D printers to find a solution.

This innovation means the lifting tool can be manufactured using additive manufacturing, thereby eliminating shipment time and reducing warehousing requirements. It offers a lower cost than conventional one-off tools made for production purposes, and is significantly lighter and considerably more compact, making it easy to transport to commercial ships to service engines. By enabling the easy creation of specific tools for pilot projects, the new tool will speed up the introduction of new products and reduce their time-to-market.

The technology utilizes reinforced polymers for structural applications, such as lifting the piston and cylinder of a Wärtsilä 26 engine with a working load of 240kg. By combining the exceptional mechanical properties and lightness of Markforged's carbon fiber reinforced filament, together with the innovative 3D printing design concept, the lifting tool is able to handle more than five times its working load.

Inspired by their previous successes with Markforged carbon fiber 3D printers, engineers at Wärtsilä redesigned the lifting tool for its Markforged Industrial Series X7 3D printer. The resulting new continuous carbon fiber part was 75% lighter than the original steel version.

In the eight months since Wärtsilä made the switch to printed lifting tools, it has saved an estimated €100,000 and reduced production time from six weeks for the conventionally produced tool to a few days using the X7 3D printer.

"Additive manufacturing opens up new possibilities for both our manufacturing and servicing operations with tool creation that is faster, less costly, and safe. It also reduces the need for stock and allows just-in-time production processes," says Giuseppe Saragò, Director, Manufacturing Excellence at Wärtsilä.

"This is an outstanding example of Wärtsilä's smart approach to manufacturing technologies, and shows the potential that new technology can have to optimize our operations. We are always evaluating other 3D printed applications, and have already seen plenty of benefits across our production floor."



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Product News

CGTech provides a VUE of the future

25 November 2019

CGTech's VERICUT Users' Exchange (VUE) events were developed to provide a conduit between the software specialist's development engineers and its global customer base. More than 50 such events have been scheduled worldwide for 2019, with more than 5,000 attendees expected.

At each event, the technical staff from CGTech provide customers with a feature review of the latest release of VERICUT – imminently Version 9 – of one of the world’s most advanced independent CNC machine tool simulation and optimisation software, with the focus on providing convenience features to improve simulation visibility, speed and efficiency of the user’s verification process.

From a global user base of more than 7,000 customers in 55 different countries using 20,000-plus seats of VERICUT to support the drive towards ever-increasingly complex components produced on multi-axis machine tools and using advanced processes, such as material deposition additive manufacturing, the VUE attendees were shown that the advances in VERICUT are intended to match the pace of change of their needs, providing an opportunity for VERICUT to support industries’ goals for efficiency and productivity.

This year, the UK VUE events have been organised in Advanced Forming Research Centre (AFRC), Renfrew, Scotland; Nikken Innovation Centre Europe, Rotherham; Carillon Industrial Services, Buckinghamshire; Newcastle Racecourse, Newcastle upon Tyne and Seco Tools, Warwickshire.

Speaking about the VUE events, CGTech technical director, Gavin Powell, said: “VERICUT has a diverse user base and our customers are found in almost every one of the advanced and demanding industry sectors, such as aerospace, defence, marine, motorsport, medical, oil & gas, petrochemical processing and other high precision engineering operations. These events provide the opportunity for users from different sectors, that may never meet, to get together and find out more about each other’s challenges. We can also explain how other sectors use VERICUT, provide a better insight into our company and software, as well as share future plans.

“One of the key elements is direct product feedback from customers. While we have an exceptional software development team, there is no substitute for demands ‘from the coalface’. Ideally, we aim to match or even exceed the requirements from our users.”

Senior technical engineer, Gavin Bridger, and Technical Engineer, Dave Woolams, highlighted the new features due with the release of Version 9.0.

“Faster is better,” said Bridger, with the development of the new graphics display providing significant gains for users. “You can render faster with more realistic and crisper views of cutting processes and machines. With dramatic improvements in the view environment; rotate or zoom while cutting, seamlessly switch view types or layouts, and change model translucency, colours or other appearance properties at any time. New flexibility to use major functions (like Section, X-Caliper and AUTO-DIFF) in any view will help programmers get things done faster.”

Speed matters...

VERICUT can simulate faster in the new viewing environment thanks to using much more GPU hardware than ever before, with dramatic performance increases for additive and grinder/dressing operations. Huge performance boosts are seen with NC Program Review and VERICUT’s free Reviewer application provide significantly faster review times for all staff, from the shopfloor to the top floor.

Mill-turn tooling enhancements include new multi tool station for turret lathes with easier setup for an arrangement of cutting tools accessed through a turret index position. Activate a tool for cutting via its offset and check remaining tools for potential collisions with the part or machine.

New turret setup feature speeds up the lathe tooling setup by selecting tools from a list, or drag ‘n drop from VERICUT’s Tool Manager to turret positions. Identical ‘sister’ tools are easier to setup by simply referencing a single tool in the library and set different offsets.

‘Restart’ and ‘Stop At’ capabilities quickly verify changes made to an NC program, and have more

control over the simulation. Initiate Restart action on any line in the NC Program window and the simulation quickly processes up to the restart line, then the display updates to show the result. A new Stop At Line Number/Count option enables programmers dealing with looping and branching logic to stop at a specific occurrence number of processing a line in the NC program.

“We have conducted numerous verification speed trials in V9.0 with significant gains achieved,” explained Bridger. “For example, a 5-axis job with 35,000 lines of code running on a Matsuura MAM 72 in Version 8.2 takes 10 minutes, with the faster processing available in Version 9.0 the same job is finished in 5 minutes 31 seconds.”

VERICUT simulates 6-axis articulated-arm robot motion from leading robot machine builders including Fanuc, KUKA, ABB, Kawasaki, Motorman and others. VERICUT also supports robots that have additional ‘external’ axes such as mounted on a linear rail.

In addition to simulation, VERICUT can also be used to adjust motion and post-process for robots. VERICUT computes joint positions from the incoming tool point commands and orientation, and then post-processes for the specific robot-language program. Most robots are programmed by ‘teaching’.

Off-line programming is preferred when there are many motions, precise positions are needed, or the process must be controlled or traceable. Support has been increased for robots including Quaternion robot motions and PentaPod (5-pod) machines with improved work offset handling, angle head attachments and probing.

Sale engineer, Scott Ravenscroft, presented the latest FORCE module developments. Force is a physics- and mathematics-based module designed to optimise machining rates. The software uses actual data for cutting tool forces and spindle power readings to calculate maximum chip thickness and feed rate.

He explained: “VERICUT covers the obvious and visible production elements, such as crashes, scrap, gouges and prove outs; Force addresses the hidden opportunities. These include inefficient programming and suboptimal feedrates caused by the CAM system’s inability to adjust cutting feedrates for varying cutting conditions.”

Breaking the key parameters of Force down into ‘attack’ and ‘defence’ to highlight how the software achieves its goals.

“In attack – we create optimal cutting conditions by maximising chip thickness and keeping the chip thickness constant. Defence comes from setting limits to prevent failure, such as maximum feedrate, cutting force and deflection. All of which is done without altering the trajectory or path of the cutting tool,” Ravenscroft stated.

Force relies on proven technology to maximise program efficiency and productivity and typically achieves savings of 8 to 15% on aluminium and 15-plus per cent on difficult to cut materials. Return on investment can often be as little as one production component, with the opportunity to analyse cutting conditions, improve tool life, protect CNC machine tools and reduce operational costs.



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Hexagon launches RADAN 2020.1 including Designer CAD-for-CAM software module

26 November 2019

Hexagon Manufacturing Intelligence has launched RADAN Designer, a new piece of specialist CAD-for-CAM software specifically for sheet metal. This module will form a part of RADAN’s CAD/CAM functionality in preparing parts for bending, nesting and cutting. From model design to part repair and modification, it will take geometry through to manufacture.

While the module is available on the new RADAN 2020.1 pricelist, existing RADAN 3D users have the option of a free upgrade. It contains a material library and several calculation methods to create the correct unfolded shape.

A major innovation in RADAN 2020.1 allows for an endless nesting workflow. The new release delivers a more flexible, fluent approach, by enabling parts for additional jobs to continuously go on to the nest. As common cutting is becoming increasingly popular, RADAN's support for it has been extended with a new Common Grid Cutting algorithm. An additional safety check has been added to detect floating scrap in punching programs.

Four significant items of new functionality have been added to the Radtube module. Firstly, with information to feed nesters increasingly coming from ERP systems, Radtube can now use CSV files, which specify the name of the product, quantity, and other parameters, negating the need to key them in again. Secondly, color coding of specific parts ensures quick identification. This runs through from the design stage and set-up sheet, so the part can be identified immediately when the machine has finished cutting, so the operator doesn't have to rely on recognizing it by shape or size.

The other two items follow on from that and are also linked to identification: improved reporting so that documentation going to the shop floor includes the color coordination, and introducing a simple line font instead of a more intricate TrueType font for text marking and imprinting parts.

In the previous release of RADAN, an option was introduced to import 3D files into Radquote, but they had to be single part files. In 2020.1, any multi-body or assembly files can be added.



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The Next Generation of VERICUT - Version 9.0

27 November 2019

CGTech is pleased to announce the latest release of VERICUT software, Version 9.0. VERICUT CNC machine simulation, verification, and optimization software simulates all types of CNC machining, additive, and hybrid manufacturing processes. The software operates independently, but can also be integrated with leading CAM systems.

“VERICUT 9.0 is ‘smarter’ than previous versions, offering more robust connections to tooling databases and the latest CAM systems,” says Gene Granata, VERICUT Product Manager. “Most users will also experience gains in performance, especially when simulating Additive or hybrid AM operations. Enhancements to VERICUT’s free Reviewer app lets programmers share with others (like machinists or Quality Assurance personnel) how parts are manufactured.”

VERICUT 9.0 features several enhancements designed to increase power and improve efficiency, including a new graphics engine. Users will experience sharper, clearer and more realistic views of machines and the machining process. Hundreds of customer-driven enhancements and software change requests were also completed.

Enhanced Graphics Display

VERICUT 9.0's greatly enhanced image quality makes it easier to spot problems and imperfections in

CIMdata PLM Late-Breaking News

machined parts. Switch seamlessly between Workpiece, Machine or Profile views, or combine them in a variety of view layouts.

Streamlined Verification

Any of VERICUT's major functions, such as AUTO-DIFF, Section, and X-Caliper, can be used in any view which streamlines the verification effort and increases productivity.

Force Optimization

Use Force "Analyze", without any prior configuration, to spot potentially dangerous machining conditions or identify underutilized tools. Force Charts has a new "Fill Comparison" option to help visualize the changes made by Force optimization to feedrates and chip loads.

Appearance Settings

Appearance settings accompany the "Color" option for components and models, and can be used to add realism to objects in VERICUT simulations. Machined parts look more lifelike and identification of errors or incorrect cuts has become easier.

Enhanced Translucency and New Stock/Design View

New features are available to quickly display the Design part embedded in translucent Stock, and show AUTO-DIFF Gouge or Excess errors in relation to the Design part or cut stock model.

X-Caliper

X-Caliper has several new measurements, and features that provide greater control over how measurements (dimensions) are shown. Images with dimensions can be printed, saved to an image file, or utilized in Setup Plans.

Setup Plan

A new Setup Plan capability makes it easier than ever to create images from the simulation with dimensions or notes that help others understand the manufacturing process. Setup Plans are easily incorporated in VERICUT's reports to document operation setups, or how machined parts should look at various stages.

Multi Tool Station

The new Multi Tool Station tool component has been added in Tool Manager, enabling users to setup an apparatus that holds multiple tools, attached to a single turret station.

Tool Change List Panel

Tool Change List panel is enhanced with capabilities to graphically setup tools on turrets, in tool chains, define orientations for "Flash" multi-function tools, and more.

Reviewer App

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VERICUT's Reviewer application is powered by the same enhanced graphics engine featured in VERICUT Verification, and users will also immediately notice the dramatic boost in performance.

New Section Window

The new Section window is easier to use with dynamic section plane locations and angle adjustments.



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