PLM Industry Summary

Sara Vos, Editor

Vol. 21 No. 27 - Friday, July 5, 2019

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CIMdata News

CIMdata Fellow and Executive Consultant Keith Meintjes Quoted in "What Lies Ahead for Generative Design?"

30 June 2019

Presented by Cadalyst Staff:

Generative design is sometimes presented as a kind of miracle cure: It eases CAD users' workload; creates lighter, stronger parts; and effortlessly finds solutions to design problems that are beyond human imagining. But what is it, really — and what might it become in the future?

Keith Meintjes, CIMdata fellow and executive consultant, simulation, led a webinar this month exploring these concepts. In "Beyond Generative Design: A New Paradigm for Product Development" he argued that it is not generative design alone that will dramatically reshape product development, but a confluence of technologies that also includes simulation and analysis, big data analytics, robust design, and advanced materials.

"We and others envision an environment for generative design using or exploiting artificial intelligence that will give us a platform to do generative design — what some people now call human-assisted design," he explained, meaning "the human is in the loop, but the computer is doing the heavy lifting."

Meintjes defined generative design as "design space exploration with optimization, and aided by computers. By our definition, it's any method that creates or affects a physical design: the geometry, the dimensions, the material choice." Ultimately, it's a process of optimization, and it's almost always underpinned by physics-based simulations.

Meintjes finds generative design a very intriguing concept because, "for millennia, ever since the beginning of time, if someone imagined a product, it had to be designed and made and tried out. The last 60 years or so, we have also been able to use simulation instead of physical tests to do virtual evaluation of proposed designs," he noted. "But generative design proposes to create or modify feasible product designs, including the geometry, from statements of requirements and constraints. So that means that you're able to go through the generative design process without starting from a proposed design, and end up with a design that is feasible and meets the requirements — which is, I think, quite an astounding thing."

Generative design encompasses a variety of tools, including rules-driven parametric CAD, shape optimization, cost and manufacturing optimization, and others. Whatever the tool, Meintjes explained, "there is always an underlying simulation application to evaluate the possibilities; so as you're going through the generative design process, the simulation application is evaluating the improvement in the design as you're developing it."

"Topology optimization … is a topic of huge interest today, it's the dominant generative design tool," said Meintjes. However, it had low adoption when it was developed in the 1990s, and "it still is very difficult to take the results from a topology optimizer and put them into usable CAD design geometry," he observed.

Is it 3D printing that has led to current interest levels in a still-flawed technology? That's only part of the story, according to Meintjes. "What we're talking about here is a new environment for generative design; it's not just layering on additive manufacturing to an old technology. We have new materials, we have advances in computational geometry — the algorithms and software — and we have this incredible rise in computing power." Advances in IT, artificial intelligence (AI), and statistical optimization have also contributed, "but what's also happening is the synergies between all of these advances that many of us believe will cause a revolution in product development and manufacturing," Meintjes predicted.

Currently, topology optimization often requires difficult and time-consuming manual intervention for translation into CAD. "If you're really going to utilize generative design to explore thousands and thousands of possibilities in the design space, having the need for human intervention at some point in each design is really unacceptable," Meintjes declared.

"The truth is, what we need to is after we've completed the design, we need to revalidate that design… all the constraints may not have been considered in the generative design, so we had to alter the design after it was generated [and] just the process of translating generative design into cad may have violated or changed the geometry enough that we need to go through this step."

The solution lies in an environment, Meintjes explained, where the generative design tools are wrapped with artificial intelligence, machine learning, and robust design capabilities. This can be provided by process integration and design optimization (PIDO) tools such as Isight, Hyperstudy, or ModeFrontier, or within the application.

There are also organizational considerations around the technology, Meintjes pointed out. "For organizations and end users, the question that needs to be answered is, 'Who's going to use the software?'" There are various flavors of topology optimization and generative design tools; some are focused on simulation experts or generative design experts, others on the general CAD community. CAD operators will use generative design as they are designing parts, because the technology is embedded in their CAD software.

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CIMdata Fellow and Executive Consultant Keith Meintjes Quoted in Digital Engineering Article, "What's Wrong with Product Design and Development?"

2 July 2019

By Kenneth Wong

Keith Meintjes, a [CIMdata](#) fellow and executive consultant, is a veteran of the auto industry. Before becoming a consultant and industry analyst, he spent three decades at GM as a simulation manager, and

then managed the automaker's global CAEIT infrastructure. For him, many of the headline-making product disasters can be summed up as the failure to identify a failure mode.

"We also have a failure to deliver on the promises of systems engineering," says Meintjes. "I think proper systems engineering would have allowed us to identify and avoid many of these failure modes."

With systems engineering, products are simulated and tested with all the disparate components included at the systems level. That means testing is done with mechanical, electrical and software components all in the loop. The last two pieces—electronics and software—take on more critical roles as Internet of Things (IoT) devices increasingly rely on sensors and software to trigger and execute functions powered by chips and processors. Some failure modes may not be uncovered during the individual component's testing, because it's triggered by the interplay between the electromechanical parts and the control software. Systems-level simulation and testing could expose such failure modes…

Systems engineering as a concept has been around for quite some time, but most of the software supporting the process began to appear about two decades ago. Though engineering and manufacturing communities have shown a growing interest in them, they haven't embraced the tools widely.

The reason? "It's the complexity of the tools," says Meintjes. "Tools like SysML [open source environment to model systems] are not executable, very difficult to use and require a large number of people at the end user companies to understand it."

To read the full article by Kenneth Wong, please visit
https://www.digitalengineering247.com/article/whats-wrong

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CIMdata Vice President Stan Pryzybylinski Quoted in Digital Engineering Article, "Is Digital Transformation Stuck in Neutral?"

1 July 2019

By Beth Stackpole

Automakers are accelerating development cycles by 3D printing prototype parts and tooling in lieu of traditional manufacturing processes. In the aerospace sector, players are leveraging the Internet of Things (IoT) to collect a vast array of sensor data to help proactively flag potential part failures or to determine when an engine is due for routine service. Even slower-moving industries like shipbuilding have their sights set on 3D modeling capabilities from simulation to augmented and virtual reality (AR/VR) to shore up and modernize traditional development practices.

Although companies in nearly every major sector have embarked on some leg of the digital transformation journey, there are still countless unexplored routes and many miles to travel. The reality is that despite the drumbeat of press reports and prominent user stories, successful and holistic transformation of engineering and product development processes still remain the exception, not the rule. Newer technologies aside, even product lifecycle management (PLM), the decades-old software platform and business process approach for syncing engineering with relevant stakeholders throughout the lifecycle, has not lived up to its full transformational potential.

"If you're a product company and you want to do digitalization, then your PLM game needs to be pretty on point, but that's further than most people are," says Stan Przybylinski, vice president of [CIMdata](). "It's amazing how many companies adopt these core data and process management platforms with lofty goals and most remain stuck in PDM (product data management). Even while vendors add all these new capabilities, the majority of companies are just doing basic blocking and tackling."

To read the rest of the article, please visit https://www.digitalengineering247.com/article/stuck-in-neutral

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Company News

Atos expands strategic partnership with Google Cloud to enable Oracle database customers to benefit from Google Cloud Platform

1 July 2019

Atos strengthens its strategic partnership with Google Cloud with two high-performance regional extensions of existing Google Cloud data centers in Frankfurt (Germany) and Ashburn VA (North America), to support Oracle database customers. These two regional extensions will be equipped with Atos' high-performance BullSequana S servers and will enable Oracle database customers to run their workloads efficiently and effectively and benefit from Google Cloud Platform (GCP).

Atos brings its expertise in end-to-end cloud orchestration and management, and infrastructure services and support, to offer Oracle database customers a fully-managed and secure cloud service which will be seamlessly integrated with Google Cloud Platform. The BullSequana S from Atos is a high-performance, modular and highly scalable server and can be easily configured to fit specific customer needs and therefore optimize costs for Oracle customers. These regional data centers are certified by Google Cloud to provide direct, secure and high-performance network connectivity, for faster and optimized access to Google Cloud resources.

"I'm delighted to expand our global partnership with Google Cloud, to now bring Oracle database customers the benefits of Google Cloud Platform so that they may harness the power of AI and ML to solve business challenges and innovate" said Thierry Breton, Chairman and CEO of Atos. "This announcement reinforces all the fruitful work we have done together over the last year, which has seen us bring our customers new end-to-end offers (encompassing AI, ML, Hybrid Cloud and Digital Workplace), and innovative services such as our joint customer AI Labs in Europe and in the US, to enable them to transform their business."

"Running Oracle database workloads, while also taking advantage of all the features of the Google Cloud Platform is a priority for many customers, so we are delighted to partner with Atos to help them do so," said Thomas Kurian, CEO at Google Cloud. "This solution from Atos means Oracle database customers can take advantage of Google Cloud's performant infrastructure and scale, as well as our strengths in areas like AI and ML, backed by Atos' expertise in business transformation and *migration."*

Atos and Google Cloud will provide customers with a single, unified process for identity management, access management, governance and administration across all environments, from GCP-based applications to database instances.

This new solution from Atos for Google Cloud reinforces the strength of the partnership. Atos was recently recognized as Google Cloud's "Global Breakthrough Partner of the Year" at Google Cloud Next 19 in San Francisco.

This new offering will be available in the second half of 2019 directly from the GCP console via the Google Marketplace.

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Atos Positioned as a Leader for Data Center Outsourcing and Hybrid Infrastructure Managed Services for Both Europe and North America

26 June 2019

Atos announced that it has been positioned as a Leader in a report highlighting its services in both Europe and for North America.

This is the 8th consecutive year that Atos has been named a Leader in the Europe-focused report, and the third consecutive year in the North America-focused report.

"*To us, it is great to be recognized again… for our global Leader position in Data Center and Infrastructure Services. This is a key part of Atos' offering and we believe this validates our strength in providing our customers with superior services that are at the foundation for organizations looking to drive transformative digital change,"* said **Eric Grall, Senior Executive Vice President and Head of Global Operations and Infrastructure & Data Management at Atos.**

The ADVANCE 2021 strategy is Atos' three-year plan to strengthen support for its customers as they face the disruption of today's digital transformation and aims to enable customers to securely manage and leverage the value of their data to create new business insights.

Atos' ADVANCE 2021 strategy targets digital leadership and supports hybrid orchestration and the journey to cloud including cybersecurity offerings, IoT and big data analytics.

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Bombyx PLM Offers PLM Software Completely Free to Educational Institutions

2 July 2019

Bombyx PLM is giving PLM away to make way and aid the industry innovators of our future.

At Bombyx PLM, we are passionate about education and want to aid higher and further education institutes by adding real-life value to the curriculum of your current and future students.

We are aware of the tight budgets within education, and how it can often be difficult to provide such 'luxuries' for students.

However, we don't believe PLM should be a luxury, and we're scrapping that notion. We want to ensure we are inclusive to all, and level out the playing field to ensure all students have the same opportunities as each other, and can use their new found knowledge and developed hard skills to excel them into their future careers.

We offer our software for free to courses and institutes of any size, and only ask the day rate of a guest/visiting lecturer for our time with your students.

If you would like more information about how you can claim your free offering of Bombyx PLM for Education, please contact us by email at info@bombyxplm.com.

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Dassault Systèmes Named Key Supplier by Groupe PSA for its Digital Transformation

1 July 2019

Dassault Systèmes announced that Groupe PSA has named the company a key supplier. This distinction makes Dassault Systèmes the first and only software provider today in Groupe PSA's global network of 8,000 suppliers to be formally recognized by the automaker as a preferred digital partner for its digital transformation.

With Dassault Systèmes as Groupe PSA's preferred digital partner, the two companies are engaging in a long-term strategy with the intent to deploy the 3DEXPERIENCE platform as a key innovation enabler across the group's activities. Like many established automakers today, Groupe PSA must address tough sustainability and technological challenges as the industry shifts its focus toward greener, more electrified, autonomous and regulated mobility. This requires new ways to invent, develop, test, make and deliver innovative customer experiences. The 3DEXPERIENCE platform offers a holistic approach that will enable every organization in the group to support this value creation process.

"Our suppliers play an important role in our strategic plans to prepare for upcoming stringent carbon emissions regulations, the move from internal combustion engines to electric, and from driven to driverless cars," said Jean-Luc Perrard, Chief Information Officer, Groupe PSA. "Dassault Systèmes shares our vision for efficiency and innovation. By making them our preferred digital partner, we can prepare with a transformative shift at every level of vehicle development."

Since starting its digital transformation program, Groupe PSA has already used the 3DEXPERIENCE platform to improve efficiency and collaboration across its research and development, technical and testing facilities worldwide, which earned Dassault Systèmes the "Best Supplier" award in 2016. As testimony to the platform's ease-of-use, 2,000 employees at its brand OPEL fully began using it within only one year of its deployment. Groupe PSA and Dassault Systèmes will now collaborate on further deployments that enlarge the scope of this transformation including a project to improve manufacturing agility and flexibility.

"Groupe PSA has been a Dassault Systèmes customer for decades and we have truly become partners to completely transform the group into an even stronger, more innovative mobility leader," said Olivier Sappin, Vice President, Transportation & Mobility Industry, Dassault Systèmes. "As Groupe PSA's preferred digital partner, we can reinforce our relationship in the coming years to help it achieve ambitious goals such as electrifying all its vehicles by 2025. Today's era of mobility requires a revolution in thinking. The 3DEXPERIENCE platform will be a game changer for them."

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DXC Technology Launches Innovation Centre in London

18 June 2019

[DXC Technology](#) (DXC) announced the opening of the DXC Innovation Centre in London for the company and its clients to develop and deliver high-impact digital solutions.

DXC's London Innovation Centre is a collaborative environment that draws on the company's global experience in digital transformation, leverages its rich industry knowledge and independent partner network, and creates an environment for the incubation of ideas, learning and development.

The London Innovation Centre adds to DXC's digital network in the UK, which includes a Digital Transformation Centre in Newcastle that is already helping customers to transform and accelerate the creation of business value. As part of this network, DXC digital technologists and enterprise solution experts will work with customers and partners to modernize and integrate mainstream IT by deploying digital solutions at scale.

"Our Innovation Centre brings together innovative technologies, creative thinking and best practices to develop innovative solutions for clients in a rapidly changing digital era," said [Maruf Majed](#), senior vice president and general manager, DXC UK, Ireland, Israel, Middle East and Africa. "The Innovation Centre creates opportunities for our people, clients and partners to gain valuable practical experience with digital technology in real-life business applications."

Local and Global Digital Ideation

The London Centre showcases emerging digital technologies such as machine learning, artificial intelligence, IoT, blockchain and robotics. There will be a focus on sectors including government, energy and utilities, healthcare and life sciences, travel and transport, insurance, financial services and manufacturing.

As part of DXC's global network of digital experience centres, the London facility will draw from global teams of digital specialists who are working on digital journey mapping and the co-creation of leading-edge prototypes. The goal is to build enterprise-grade, secure and globally scalable solutions for rapid deployment in customer environments.

Development, Engagement and Experiential Opportunities

The Innovation Centre will create new learning and career development opportunities for DXC employees – including personal and organizational digital skills and capabilities – and will contribute to the wider technology and business communities in the UK.

Initial digital client engagements will focus on:

- Digital Account Opening – For customers interacting digitally with their banking providers, who have an obligation to their customers and are bound by government regulation, to ensure that interactions are carried out lawfully;

- Field Worker Effectiveness – Using the latest voice-controlled headsets and the ability to connect workers using digital workflows, tasks can be carried out efficiently and details uploaded into business systems;

- KPI Dashboard – Providing a C-level view of enterprise key performance indicators; and

- Smart Factory Concept – Increasing productivity through digital manufacturing technologies and IoT.

Representing a view from the DXC Partner Network, Peter Almond, PwC Alliance Director, said: "The launch of DXC's London Innovation Centre provides PwC with a powerful extension to its own eco-system of customer experience centres and brings the ability to co-create innovative digital solutions that are rooted in the realities that come with deploying technology at scale across complex enterprise environments."

DXC's London Innovation Centre will also leverage research and frameworks that address the concepts of "Winning in the 21st Century Organisation" and "Developing the mindsets of 21st Century Humans" from Leading Edge Forum, an independent think tank.

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ESI Group wins the Innovation prize of 'L'Usine Digitale Trophies for Simulation and Digital Technologies' along with the 'audience award' for its Hybrid Twin™

5 July 2019

In June, ESI Group was awarded the 2019 prize of 'L'Usine Digitale Trophies for Simulation and Digital Technologies', in the "Innovation" category, along with the 'audience award' for its Hybrid Twin™. The prizes were presented to Alain de Rouvray, Founder and Chairman of ESI Group, at the TERATEC Forum, the meeting of international experts in the field of Simulation and Big Data.

The common digital simulation models, referred to as 'Digital Twins', are currently meant to predict and drive the behavior of industrial products in Service. However, they are built out of data from past events and based on patterns empirically derived from similar products under similar circumstances. They are not efficiently enriched by elements identified in real time on a given product, and do not adapt to random or unencountered occurrences, as will typically result from innovative design, new materials and processes, or new operating conditions. They lack the ability to account for unpredictable factors not identified during the regulatory certification, such as specific product aging due to wear and tear and moment by moment changes in the environmental operational conditions.

ESI's Hybrid Twin™ aims to resolve these challenges of specific and predictable product performance and piloting in-Service. Through the use of model reduction algorithms based on PGD (Proper Generalized Decomposition), and by combining detailed virtual prototypes, integrating all ESI's historical physics-based materials science and knowledge, with an enhanced digital twin (based on the IoT data), ESI Group has created a concept and disruptive industrial solutions enabling numerical simulations of products in-Service, and making predictive maintenance reliably actionable. The Hybrid Twin™ uses virtual prototypes enriched with real data and exploits A.I. and Machine Learning to make more accurate predictions possible and practical. The Hybrid Twin™ monitors system changes in real time and offers the possibility to accurately predict individual product specific behavior. Taking two real examples, the Hybrid Twin™ means an average reduction of 30 % in the maintenance and monitoring costs of a wind farm or reducing down time and maintenance costs of helicopter systems.

Alain de Rouvray, Chairman of the ESI Group, states: 'Discovery and innovation do accelerate when experience and intuition are strengthened by rational prediction. This is where ESI's Hybrid Twin™ comes in, 'hybridizing' the best of both worlds: The causal theoretical models of the 'as built' and certified virtual prototype, and the empirical information continuously gained from the actual product in operation. In a world seeking ever more personalization, the Hybrid Twin™ offers a solution for manufacturers by bringing together prediction, personalization and knowledge derived from proven

physics and available data. Beyond certification of the brand-new product, prediction of the performance in-Service of the used, aged and repaired product, now occupies a central position among the major engineering challenges of Industry 4.0 and of the 'Outcome' economy focusing on continuous results in actual operation. The real-time model optimization offered by ESI's Hybrid Twin™ ushers the new era of the physics based 'Product Performance Lifecycle' (PPL™), taking the incumbent paradigm of the CAD based 'Product Lifecycle Management' (PLM) to the next era, i.e. to the monitoring and piloting of the real product in its real life, from launch to maintenance and safe retirement. We are indeed very proud to receive this coveted Innovation prize along with the 'audience award', both rewarding the work of all our engineers, personnel and partners who, for over 45 years, have supported industry manufacturers wishing to improve and accelerate the understanding and performance of their products for ever increasing economic social benefits!'.

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Infosys Announces Strategic Partnership with Toyota Material Handling Europe

24 June 2019

Infosys announced a long-term strategic partnership with Toyota Material Handling Europe (TMHE). As IT services partner, Infosys will help TMHE in its digital transformation journey by facilitating transformation to a scalable digital hybrid cloud platform, providing application services, digital workplace, infrastructure management and a dedicated data center operation.

Infosys will help drive innovation and optimization agenda backed by Next Generation AI and automation solutions and deliver a future ready landscape for TMHE.

Jasmeet Singh, Executive Vice President and Global Head of Manufacturing, Infosys, said, "We are delighted to be working with TMHE in their digital transformation journey. By offering end-to-end services leveraging our deep expertise in executing complex programs, we will assist TMHE modernize its legacy applications, bolster agility and drive efficiencies. The establishment of a data center to focus on TMHE's needs is an integral part of our commitment to find unique solutions and models to drive operational excellence for our clients."

Johan Kroon, CIO, Toyota Material Handling Europe, said, "As a leading industrial technology company, we are committed to constantly innovating to accelerate our digital transformation and leveraging the potential of new technologies to enhance our competitiveness and cost optimization efforts. We are happy to partner with Infosys in this endeavour and look forward to scaling new heights together."

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Leading European institutions partner with IBM to accelerate joint research and educational opportunities in quantum computing

3 July 2019

IBM announced at the World Conference of Science Journalists the expansion of the IBM Q Network™ in Europe to include additional universities and an international research organization. These institutions

are collaborating with IBM QTM to accelerate joint research in quantum computing and develop curricula to help train students for careers that will be influenced by this next era of computing, across science and business.

The IBM Q Network is a global community of forward-thinking companies, academic institutions, startups and research labs working with IBM to advance quantum computing and foster a growing ecosystem.

As IBM Q Network partners, Aalto University, University of Turku, EPFL, University of the Basque Country and The International Iberian Nanotechnology Laboratory will have direct access to IBM Q Network resources and access to the IBM Q Experience™'s publicly available quantum computing systems for teaching, as well as faculty and student research projects that advance quantum information science and explore early applications.

Examples of future direction of quantum computing application research and exploration by these universities include:

Aalto University (Finland): The university plans to work with IBM researchers to extend the quantum computing ecosystem in Finland. This intended collaboration in education, outreach and science will strengthen Aalto's capabilities as a center of excellence in quantum computing.

University of Turku (Finland): The university plans to investigate quantum computation and simulation research, as well as use the IBM Q Experience for outreach and specialized education focused on quantum algorithms, quantum and classical programming, and fundamental quantum physics.

EPFL (Switzerland): The university plans to target the creation of a broad community of researchers, innovators and educators in quantum science and engineering via a strong collaboration with the IBM Q Network. EPFL intends that students and researchers will contribute to scientific progress in quantum computation, sensing and communications, as part of an Edge-to-Cloud Digital Technology thrust. Moreover, advances in quantum engineering and science will be reflected in future EPFL Digital Educational curricula.

University of the Basque Country (UPV/EHU, Spain): A leading university on quantum research in Spain, UPV/EHU plans to work with IBM Q to promote the quantum ecosystem in Spain. A series of highly interdisciplinary events such as conferences, hackathons and lectures are being planned for community building and to identify promising new routes towards practical quantum applications.

The International Iberian Nanotechnology Laboratory (INL, Portugal/Spain): INL plans to promote the collaboration with the IBM Q Network in the field of quantum science, technology and computing. As a first step, INL will work towards generating awareness of quantum computing's near-term potential among relevant stakeholders from education, business and science.

University of Innsbruck (Austria): The university plans to work with the IBM Q Network on its quantum-related experimental and theoretical research, including quantum algorithms and quantum computing, quantum optimization, simulations, quantum networks and many more areas.

Additionally, ETH Zurich, Chalmers University of Technology, and Saarland University will collaborate on joint research with the IBM Q Network to advance the foundational science, technology, and software required to enable more capable quantum systems.

Examples of future joint-research collaborations include:

Swiss Federal institute of Technology in Zurich (ETH Zurich, Switzerland): ETH Zurich plans to work

with IBM Q to explore how quantum computing may be used to advance the scientific understanding in chemistry, physics, machine learning, and optimization, including new quantum algorithms for the efficient calculation of the electronic structure of molecules and the simulation of the static and dynamic properties of relativistic field theory models on a lattice. In addition, the university intends to study quantum algorithms for combinatorial optimization, distribution learning, classification, and efficient simulation of stochastic models, for potential applications in finance and logistics.

Chalmers University of Technology (Sweden): Home of the Wallenberg Center for Quantum Technology (WACQT), the university plans to work with IBM Q to explore how quantum computing can be utilized to increase its knowledge on chemicals and reaction processes. This intended collaboration also includes education and outreach activities to contribute to the rapidly growing quantum community in Sweden.

Saarland University (Germany): The university plans to work with IBM Q to train its quantum engineering students. Saarland also intends to collaborate with IBM in research in the field of quantum control theory and practice – the firmware for quantum computers.

"Developing quantum computing skills and expertise throughout the world is what will lead to the discovery of applications that drive breakthroughs in business and science," said Walter Riess, IBM Q Europe lead, IBM Research. "The collaboration in plan with these academic and research leaders in Europe is vital to how we will grow a 'quantum ready' ecosystem of scientists, professors, developers, and students."

The IBM Q Network also announced last month that Consejo Superior de Investigaciones Científicas (CSIC) established an IBM Q Hub in Spain. And this September, IBM's lab in Zurich will host a Qiskit™ Camp to give developers, researchers, and students an immersive learning experience with the publicly available IBM Q Experience, and the full-stack open source Qiskit quantum software framework. For more about this Qiskit Camp, visit: https://community.qiskit.org/events/europe/

The IBM Q Network provides more than 60 organizations across the globe with quantum expertise and resources, cloud-based quantum software and developer tools, as well as IBM Q Experience access to IBM's publicly available or, for those who have contracted for premium access rights, IBM's most advanced, commercially available and scalable approximate universal quantum computing systems.

In addition, the IBM Q Experience now supports more than 140,000 users, who have run more than 10 million experiments and published more than 170 third-party research papers. Developers have also downloaded Qiskit more than 210,000 times to create and run quantum computing programs.

For more information about the IBM Q Network, as well as a full list of all partners, members, and hubs, visit https://www.research.ibm.com/ibm-q/network/

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PROLIM Corporation Celebrates Its 14th Anniversary

26 June 2019

PROLIM is celebrating its 14th anniversary. After having exponential growth in the US and India, the company has focused on expanding its wings across the globe.

PROLIM was founded on June 14, 2005 in Michigan, US. PROLIM helps small size customers to Fortune 1000 customers around the world. The company has developed unique proprietary processes, PLM solutions, and software integration tools that allow customers to develop innovative products and release faster to the market. The company's consulting services include IT, PLM and IOT solutions and consulting.

"We celebrate 14 years of success, I would like to thank all our customers, partners and employees who have been a part of this momentous journey. My sincere thanks to Siemens who is our incredible customer, partner and guided us along our journey. We also have incredibly dedicated and trustworthy employees who are passionate about PROLIM's vision, values and commitment to our customers," says Prabhu Patil, CEO of PROLIM.

PROLIM entered the US market in 2005 and since then has won numerous awards and received recognition from many local and international organizations and recently it is recognized MSME Award for Best Excellence and many more. Some of the following awards include:

· 2018 Best Siemens Solution Partner PLM American Award
· ISO 9001-2015 Certification
· 2018 Best Business and Industry Award by Farmington Hills
· 2018 Best MSME Award for Best Excellence
· 2017 SBA Entrepreneurial Success of the year award
· 2016 Entrepreneur of the Year Award
· 2016 Corp Winner DiSciTech Awards
· Inc. 500 Fastest Growing Private company in America

During the past 14 years, PROLIM has experienced year-to-year growth through differentiating its products and services from the competition. PROLIM has listened to their customers and delivered ground-breaking advancements in ensuring their products meet the requirements of the 21st century.

PROLIM takes pride in the engineering excellence of their high-quality and high-performance products. All products are available for a trial period and professional services for proof of concept-free PLM analysis can be provided on request. Included in the new branding is a redesigned company website (www.prolim.com). PROLIM will also be executing several promotional and informational initiatives throughout this year in support of its 14th anniversary.

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SAP Analytics Cloud Gets Top Rankings in Planning and Enterprise BI and Analytics Platforms Reports

26 June 2019

SAP today announced that a leading industry analyst firm recognized the SAP Analytics Cloud solution with top rankings. This announcement was made at the SAPinsider conference held June 25–27 in Amsterdam.

"…findings validate that SAP Analytics Cloud offers our customers a best-of-breed enterprise planning platform with inherent reporting and augmented analytics to allow collaboration on one connected plan to make fast, confident decisions," said Gerrit Kazmaier, SVP, SAP HANA and Analytics. "Our modern analytics solution is growing at such a phenomenal rate because we made it easier for our customers to plan, analyze and predict all in one place — unlike other vendors' solutions there is no need to stitch together and use separate tools for planning, BI and advanced analytics."

Aço Cearense Group (GAC) is a metallurgical company based in Fortaleza, Brazil. Manuel Robalinho, IT project manager and SAP consultant at GAC, said: "Aço Cearense uses SAP Analytics Cloud to manage and streamline the company's budget processes and operations to be more efficient. For the first time, thanks to this unique platform, we're able to spend less time on the budget process and more time on scenario analysis to improve results."

The latest updates delivered to SAP Analytics Cloud include analytics design and collaborative enterprise planning capabilities for the SAP Business Warehouse application, the SAP BW/4HANA solution and SAP S/4HANA. For more information, read "Announcing the Q2 2019 Release of SAP Analytics Cloud."

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SAP Named a Leader for Industrial IoT Platforms in Manufacturing

26 June 2019

SAP today said that it has been named a Leader in a worldwide Industrial IOT assessment.

This report recognizes SAP's strengths, including the commitment to continue embedding the Internet of Things (IoT) into solutions — such as SAP S/4HANA, SAP C/4HANA and SAP Digital Supply Chain — to innovate intelligent technologies for SAP customers. The report also notes that SAP's focus on enabling business networks is complementary to its IoT strategy.

"With the unprecedented growth in enterprise data and the rise of intelligent technologies such as the IoT, customers have new opportunities for business innovation," said Elvira Wallis, senior vice president and global head of SAP Leonardo IoT. "SAP's digital platform and intelligent technologies enable faster time to value by directly integrating SAP business applications with real-time IoT data and opening a broad range of new opportunities for the Intelligent Enterprise. At SAP, we believe best-run businesses are data- and process-driven, and we're committed to help deliver on this promise."

SAP Leonardo IoT is an industrial IoT solution designed to help customers make better-informed, real-time decisions, achieve superior business outcomes and create new business models using IoT sensor data. SAP solutions' ability to associate business systems semantics integrated with SAP Leonardo IoT creates a superior customer experience. This supports new business models and revenue streams as well as bringing overall situational awareness to unprecedented levels powered by IoT-enabled business processes.

With SAP Leonardo IoT, customers can embed the IoT directly into line-of-business applications, extend existing business processes with IoT capabilities or create new IoT-based applications, while keeping their core business processes stable. This allows customers to align innovation with their unique business needs.

In addition, SAP Edge Services enables customers to extend their business processes to the edge, close to the source of data, for immediate outcomes. The strong built-in integration of SAP Leonardo IoT with SAP Edge Services provides customers with the choice to process sensor data and business data at the edge or in the cloud for optimal business outcomes.

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Taking Action for a World Without Plastic Waste

2 July 2019

From the SAP newsroom:

A new interdisciplinary project at SAP, "Beyond Single-Use Plastics," is launching aligned with Plastic Free July.

Plastic Free July is a global campaign involving millions of people annually to become part of the solution to plastic pollution. Started in Western Australia in 2011, it has evolved from a small initiative to a worldwide movement led by the Plastic Free Foundation, a not-for-profit-organization with the vision of a world without plastic waste.

Participation is growing with increased public awareness. In light of the appalling numbers — ranging from 4 to 12 million metric tons of plastic that enter the ocean each year — more and more people see the need to act and join forces.

The challenge at hand is significant and no single person or organization can solve this alone.

Scale Through Technology and Tools

How can SAP live up to its responsibility and play a part both as an enabler and exemplar? Innovative digital technology and tools, such as the Plastics Cloud, support the transformation toward a more circular, zero-waste economy and help achieve United Nations Sustainable Development Goal (UN SDG) 12: Responsible Consumption & Production.

The opportunities to make an impact seem endless; that's also what Jim Sullivan, Stephen Jamieson, Padmini Ranganathan, and Damien Johnson believe. The four SAP employees recently teamed up with 158 leaders from different walks of life during the Ocean Plastics Leadership Summit to better understand the scope of plastic pollution and to develop cross-industry solutions and partnerships in response.

Walk the Talk

To start with itself and lead by example, SAP has updated its Global Environmental Policy as part of the 10th anniversary of the company's sustainability journey and has enhanced its environmental targets with a new goal to phase out single-use plastics by 2020.

To achieve this, a new interdisciplinary project called "Beyond Single-Use Plastics" launched this month in conjunction with the start of Plastic Free July. The two-part focus includes:

- Identifying, eliminating, and finding alternatives to single-use plastics at SAP
- Driving awareness for the global plastic problem both internally and externally

Involve Employees

Employee engagement is essential to making the change happen. A global network of nearly 200 employee sustainability champions and representatives of the environmental management system (EMS) across more than 55 SAP locations act as change agents. Together with other engaged employees, they drive multiple local grassroots initiatives with admirable passion and creativity.

Take Cherry Xu as one example. Together with a team of colleagues from the SAP Labs Shanghai, she has partnered with the Tongji Design and Innovation school and a group of students to conduct a zero-waste research project. It is part of the preparation phase of a broader zero-waste program and the long-term vision to turn SAP China into a zero-waste workplace. Short-term, the team is getting SAP Labs Shanghai ready to comply with a new government regulation introducing waste segregation in China, with Shanghai as prototype testing place starting July 1.

"It is a big change for us here. During all our lives, we have never learned to separate waste. Educating and supporting employees is therefore very important," Xu points out of the challenge. With videos, posters, a zero-waste WeChat group, and other communication measures, she and the team are hoping to master it.

Other examples of taking action include the Vancouver green team's zero-waste contest, one of the first zero-waste initiatives at SAP dating back to 2014, as well as the "Power of One" campaign through which sustainability champions in Ireland spread toolkits and tips for reducing single-use waste. As a result of the campaign, the catering partner of SAP Ireland started removing single-use plastics from the canteens and replacing disposables, such as yogurt cups, bin bags, and sandwich wrappers, with biodegradable and compostable alternatives.

Inspired by these efforts, Shane Finlay and members of a green team in the UK set out for a dumpster dive in 2018, during which they found 1,019 plastic cups and 481 coffee cup lids in one day only. This helped to raise awareness in the office, where then they replaced single-use coffee cups with reusable bamboo coffee cups. This month, the unstoppable team will re-run the dumpster dive to do a comparison with the 2018 results. They expect to see great progress.

Encouraging employees to change behavior and reduce plastic waste by handing out SAP branded reusable mugs, cups, bottles, or lunch boxes has been the focus of U.S.-based sustainability champions in Tempe, Palo Alto, and Philadelphia, as well as among the SAP Ariba team in Prague, with its "Reduce-Reuse" initiative.

In most cases, a strong collaboration of local facilities managers and sustainability champions is the key to success. At the SAP office in Barcelona, this resulted in tangible results: There is no plastic cutlery for internal events anymore, coffee and tea are now stirred with spoons instead of plastic sticks, and the large plastic bottles are to be replaced by osmosis machines.

SAP employees are going beyond the SAP premises and contributing through beach clean-ups along the coast of Ireland, Normandie, and Southern France. Florian Simeon from the SAP Labs Mougins reported after World Oceans Day: "Even though there already was a beach clean-up at Fort Carré one week before, our team still collected 1,050 liters of waste, with a total weight of 80 kilograms in two hours and filled the SAP truck completely! At the end of the day, everybody was proud of the job accomplished and of having joined the waves initiatives to protect the oceans."

It is always the people that matter and make a difference. United by a shared purpose to help the world run better and improve people's lives, SAP employees all over the world are teaming up to take action.

The internal online group shows that you don't have to be in one location to become active, but can also virtually participate in sharing ideas for reducing single-use plastic at work and at home.

There is still a lot of work ahead, but this Plastic Free July (and beyond), there is hope that we can save the planet from drowning in plastic — if we all pull together.

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Events News

Altair Announces 2019 Global Technology Conference to be Held in Detroit

27 June 2019

Altair will hold its 2019 Global Altair Technology Conference (ATC) at MGM Grand Detroit, in Detroit, October 10-11. Keynoted by leading industry thought leaders and executives, the ATC is a learning forum for ideas and solutions to facilitate new discoveries and faster decisions.

"Our vision is to transform product and business decision-making by applying simulation, data intelligence and optimization," said James R. Scapa, Altair's founder, chairman and CEO. "The Global ATC's agenda will reflect how we leverage simulation, optimization, high-performance computing, cloud technologies, and data intelligence to design a disruptive future."

The rich, two-day agenda will include presentations that demonstrate the power and possibilities when simulation technologies are combined with data science. Technology experts, designers, engineers, IT specialists, and data scientists will converge to discuss the latest technology trends such as Internet of Things, digital twins, artificial intelligence, and machine learning. Sessions will also include the role high-performance computing, simulation, and optimization play in creating cutting-edge products faster than ever.

Submit an abstract by Monday, July 15, 2019, for a chance to share your expertise at the two-day conference aimed at facilitating new discoveries and fast decision making. Register to attend and join the conversation with industry leaders and technology experts at the 2019 Global Altair Technology Conference.

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ESI: Shaping the Next Generation of Aerospace Thanks to Virtual Prototyping

5 July 2019

ESI Group attended the 53rd International Paris Air Show from June 17 to 23 2019. By offering immersive experiences and exclusive interactions with its experts, ESI demonstrated the essential role of simulation in helping Aeronautics and Aerospace players in their quest for performance, productivity and sustainability. Its Virtual Reality solution was also featured on customer booths (Daher, Safran Nacelles, etc.).

The aeronautics and aerospace industries are facing major challenges: design and control of the supply chain in light of a significant increase in passenger traffic (6 billion by 2030 against 3.7 billion today), environmental challenges requiring an accelerated renewal of the fleet, security challenges and behavioral changes of increasingly connected passengers. To face all these challenges while meeting budget constraints, Virtual Prototyping, displacing the need for real tests and prototypes, is critical to address and accelerate the sector's development.

Thanks to its comprehensive proficiency in prototyping techniques based on the physics of materials, ESI offers solutions that meet the challenges of industrial transformation to improve the performance of products throughout their life cycle. Combined with virtual reality, these solutions become immersive and operator-centric. They accelerate collaborative decision-making from the project innovation stage to predictive maintenance.

According to Cristel de Rouvray, CEO of ESI: "ESI is a trusted partner, truly capable of working with aerospace groups in their transformation thanks to Virtual Prototyping. We act as an accelerator that allows aerospace manufacturers to meet all their design, production, maintenance, environmental and safety challenges, and to consistently produce faster, better and cheaper. The International Paris Air Show is a great opportunity to showcase the results of our partnerships in aeronautics and in other industries with relevant cross-over experience, like the automotive industry where we serve as a long-standing catalyst for better performance."

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Financial News

Infor Announces Details for Q4 Fiscal Year 2019 Investor Call

25 June 2019

Infor announced materials related to the Infor investor conference call on Tuesday, June 25, 2019, at 10 a.m. Eastern time, are provided on the Investor Information section of Infor's website.

A digital recording of the conference will be available for replay beginning on Tuesday, June 25, 2019. To access the recording, guests will use the dial-in details listed below:

Encore US Toll Free Dial-In #: 1 888 286.8010

Encore International Direct Dial-In #: +1 617 801.6888

Encore Dates: 6/25/2019 12:00 PM EST- 7/9/2019 12:00 PM EST

Conference Passcode #: 57828970

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Implementation Investments

3D Systems Advancing High Performance Automotive Sector with Leading Industry-specific Workflow Solutions

3 July 2019

3D Systems announced two customers – Rodin Cars and Stewart-Haas Racing – that are using the company's plastic and metal 3D printing solutions to dramatically improve speed and performance in their cars. With the help of 3D Systems, Rodin Cars and Stewart-Haas Racing, two industry leaders, can rapidly create durable parts -- including design and prototyping with faster iteration, and production. This approach enables quicker time to implementation, and lower total cost of operation. The integration of 3D Systems' additive manufacturing solutions into these automotive production workflows is one more example of how the company is expanding applications, use case by use case.

Accelerating Automotive Design and Production

Rodin Cars (North Canterbury, New Zealand) uses 3D Systems' direct metal printing (DMP), selective laser sintering (SLS) and stereolithography (SLA) technologies to design, develop and build the world's very best, maximum-performance open-wheel cars for racetracks.

"The extreme conditions of track racing leave no room for error," said David Dicker, founder, Rodin Cars. "Many components that we manufacture in-house have geometrical complexities that only 3D printing can provide. What we're able to accomplish through the breadth of solutions offered by 3D Systems' printers is second to none, providing build-speed and design advantages that are hard to match."

The high performance track-car manufacturer uses the sPro 230 for SLS production parts, the ProX® 800 for SLA tooling for carbon fiber forms with 3D Systems' Accura® Bluestonematerial, and the ProX DMP 320 with 3DXpert™for titanium production parts of exhaust collectors and mufflers, uprights and hubs, as well as a wide range of component mount brackets. As a result, Rodin Cars is able to quickly manufacture full-size prototypes as well as production components without the need for tooling. It is also able to advance complex design concepts, and produce lighter weight metal parts not manufacturable in any other way.

Stewart-Haas Racing (Kannapolis, North Carolina) uses powerful 3D scanning with 3D Systems' Geomagic Wrap® reverse engineering software and the ProX 800 printer to produce aerodynamic components for race car component development and wind tunnel testing. For a NASCAR team, perfecting automotive components designed to increase speed and performance is a vital ingredient for success. Geomagic Wrap is used to collect scan data from the car components, process it, and create .stl files for shape deviation comparison. 3D Systems' 3D Sprint® software is used to prepare and optimize the CAD data and manage the additive manufacturing process on the ProX 800. Using 3D Systems' Accura 25 material, Stewart-Haas Racing's engineers are able to rapidly print large parts with a smooth surface finish and precise dimensional accuracy.

"Everything we do is related to putting more speed into our cars," said Reneau Van Landingham, aerodynamic design group manager, Stewart-Haas Racing. "Our most valuable asset is time. The faster we can develop concepts that improve the performance of our cars on the track, the better. The ProX 800 plays a big role in this effort because it enables us to produce parts efficiently and accurately during this development process."

3D Systems' extensive, integrated portfolio of additive manufacturing solutions – including materials, software, hardware and services - is enabling the transformation of digital manufacturing processes, and thus businesses. Through collaboration with its customers, 3D Systems continues to innovate, developing new materials and technologies to meet its customers' unique business needs.

"3D Systems' customer-specific, application driven approach is advancing the adoption of digital manufacturing," said Vyomesh Joshi, president and CEO, 3D Systems. "Our innovative materials and broad portfolio of hardware and software allows manufacturers to seamlessly integrate 3D printing into their production workflows. Our world-class experience and expertise, in collaboration with our industry-leading automotive customers, results in solutions that help them design and produce parts quickly, significantly reduce the product development cycle, drive down cost, and stay ahead of the competition."

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C3D Toolkit Expands Into VR Applications

3 July 2019

VR Concept, a software developer focused on industrial-level virtual reality (VR), chose the C3D Toolkit from C3D Labs for extending its 3D virtual prototyping tools.

VR Concept develops virtual prototyping software for collaborative work with 3D models in the fields of manufacturing, architecture, and construction. By deploying the toolkit from C3D Labs, VR Concept brings CAD design tools to its proprietary application and expands the list of CAD formats it supports.

The VR Concept application downloads CAD/BIM/CAE models to a VR environment so that users can evaluate the exterior and the ergonomics of the product's design. The application shows whether collisions could occur, and goes on to disassemble and reassemble 3D models. VR Concept can also be used to hold meetings and train personnel. The easy-to-use application does not require programming skills and so enables rapid starts in virtual reality.

The application provides functionality for interaction with 3D models generated by different CAD systems in VR, and so VR Concept decided to apply ready-to-use file converters from C3D Labs. In addition, the company aims to offer powerful CAD functions in VR environments. Towards these purposes, VR Concept licensed two modules from the C3D Toolkit:

C3D Converter data exchange module for reading imported CAD data accurately

C3D Modeler geometric kernel for constructing 3D models and editing them

In the first stage, VR Concept plans to deploy C3D Converter in its VR application to read 3D models provided in JT format, a format that is in high demanded by the aerospace, engine, and shipbuilding industries. Next, the company plans to develop 3D modeling functions with C3D Modeler. This will enable users to change the geometry of 3D models, such as expanding pipe diameters and making holes, directly in the VR environment.

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Capgemini enables a global business and technology transformation journey at F.I.L.A. Group

27 June 2019

Capgemini has successfully helped F.I.L.A. Group (Fabbrica Italiana Lapis ed Affini), one of the world's leading suppliers of art materials and related products, to design and implement a new unified operating model with the capacity to integrate its multiple businesses around the world. The new solution defines shared digital processes and a common logistics infrastructure for all the Group's brands and products across 20 companies in over 150 countries. The combined enterprise system is based on SAP S/4HANA®, an intelligent business software suite.

With almost a century of history, F.I.L.A – founded in 1920 in Florence (Italy) and managed since 1956 by the Milanese Candela family – has established itself as a world leader in the industry of creative and artistic expression, with manufacturing plants, dozens of brands and thousands of products distributed in every continent. The company has experienced a rapid and continuous growth over time with the development of famous brands, such as Giotto, Tratto, Das, Didò, Pongo and Daler-Rowney, and Canson, as well as specific products for various sectors, from schools to fine arts.

In order to unify and optimize the company's core processes and also strengthen customer relations, F.I.L.A. wanted to address the complexity of its vast, disparate global organization. It decided to implement a structured business and technology transformation program named "DNA" (Drawing New Attitude), based on a common operating model to be deployed to all Group companies, using new technology solutions with a future-ready design that could handle both the business and manufacturing challenges of a sector in constant evolution.

A series of local companies is transformed into a single global entity

With the aim to create a unique model that combines control requirements with operational flexibility, F.I.L.A. Group and Capgemini worked together to develop a new enterprise platform based on a SAP S/4HANA solution, which was implemented initially in 20 companies and then extended to the entire Group. Within the framework of this extensive transformation project, Capgemini designed a solution to optimize the distribution model and reshape intercompany coordination, transforming a series of local companies into a single, global entity. A common operating model for all companies was defined, that included monitoring and controlling processes for investments and common current expenditure, along with a unique model of accounting-financial and operational-commercial reporting, that would enable F.I.L.A. to effectively manage an increasingly complex supply chain.

The choice of the SAP S/4 HANA solution allowed the implementation of a centralized management of the multiple business models within a single system and enabled the integration of innovative cloud-based solutions.

"With its established international expertise and best practices in digital operations, Capgemini was ideally suited to accompany F.I.L.A. in its business and technology transformation journey. Thanks to our Drawing New Attitude project, we have been able to equip ourselves with a common governance model, unifying both procedures and the management of company processes in our various plants," said Emanuele Messina, Chief Information Officer, F.I.L.A. Group. "Furthermore, this led to the definition of a single control and profitability analysis model that delivered better visibility of the value chain, a key factor in supporting the creation of an international distribution hub."

"Combining our deep knowledge in manufacturing andSAP S/4HANA, Capgemini was able to contribute to F.I.L.A.'s transformation journey by addressing the complexity of their business and

translating their desired approach into architectural future-ready solutions. Designed to optimize their distribution model and reshape their processes F.I.L.A.'s new unified platform and approach has transformed a set of disparate local companies into a single, global entity," said Eraldo Federici, Manufacturing and CPR Director, Capgemini Business Unit in Italy.

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Capgemini selected by Volvo Cars for digital and cloud transformation

3 July 2019

Capgemini announced a three-year Master Services Agreement with Volvo Cars to digitally transform its operating model and modernize its IT landscape. As part of the new agreement, Capgemini will deliver a wide range of transformation services including Product Orientation, DevOps and Cloud. The new agreement reinforces the long-term relationship between Capgemini and Volvo Cars, making Capgemini one of Volvo's main suppliers for digital transformation and cloud services.

Capgemini was selected, following a competitive tender process, for its ability to enable large and complex transformations, its global expertise within both business and IT environments, and its proven track record for delivering digital transformation solutions to the largest global automotive brands in the market.

"We are pleased and proud that Volvo Cars has selected us as one of their main partners to help with their transformation. This agreement will combine our skills and expertise within the automotive industry on global and local levels, and we are excited to start a new journey with Volvo Cars," said Anil Agarwal, President of the Scandinavia Business Unit at Capgemini.

The services under this agreement will leverage the full global potential of Capgemini Group and be delivered by its global delivery centers in Sweden, Belgium, USA, China, Poland and India.

Capgemini will be a main provider of end-to-end SAP consulting and technology services (including new SAP S/4HANA® implementation projects, application management and support, and infrastructure/platform services). Capgemini will also deliver services in business transformation, technology transformation, application development, application management and support, project services, digital manufacturing, packaged solution implementation, hosting, security service desk, and onsite support.

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ITFAS Finds Great Value in Centric PLM

2 July 2019

ITFAS, the buying company of the Kiabi Group, the affordable, French fashion brand, has selected Centric Software's Product Lifecycle Management (PLM) solution.

Founded in France in 1978, Kiabi revolutionized ready-to-wear clothing with the concept of affordable fashion for the whole family. Now an international group with 500 stores in 17 countries, Kiabi generates nearly two billion euros in turnover. Kiabi's ambitious development strategy is based on a

cutting-edge, cross-channel model.

To handle growth, Kiabi needed more visibility and transparency, a single version of the truth and business best practices to harmonize information systems.

"We have been expanding our procurement operations in Asia, " explains François Perche, Information System Manager at Kiabi, "We are now closer to our supply chain partners and we are willing to integrate more functions into this structure. As we continue to grow and hire people, we need adequate tools to collaborate efficiently and support them."

Kiabi assessed several software options before selecting Centric PLM.

As Perche says, "Centric has great fashion and retail references, such as Auchan, Kering Group, Li & Fung, Loblaws, LVMH, Mango, PVH and Under Armour. They are known to bring a lot of experience, best practices and powerful out-of-the-box features. During the RFP process, we were impressed by the potential configurability and flexibility of Centric PLM."

"With Centric PLM in place, we hope to streamline our fragmented application landscape, update outdated systems to a more sustainable technology stack and realign our business processes with industry best practices."

"Centric offers a lot of modules to fit our future needs, so we expect this partnership to be long term," concludes Perche.

"We would like to welcome ITFAS and the Group Kiabi on-board," says Chris Groves, President and CEO of Centric Software. "Kiabi is an innovative company who will use Centric for complex collaboration across many internal and external users, departments and locations. We're delighted to partner with Kiabi for their digital transformation."

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Norled Sets Sail for Digital Transformation with Infor

1 July 2019

Infor announced that Norled AS, one of Norway's largest ferry and express boat operators, has invested in Infor CloudSuite Human Capital Management (HCM) to support its digital transformation. The dedicated HR suite is expected to help reduce costs; instill greater agility in responding to staff changes, expedite HR processes and improve compliance.

Norled will roll out the Infor CloudSuite in clearly defined phases to enable centralised control and help ensure a high-quality end-user experience. The first phase, rolling out functionality to sea-going vessels, is set to go live in early 2020.

Following a thorough review of the market by Efab, a Norwegian consultancy, Infor was chosen from a shortlist of 17 potential partners as it was the only provider to deliver full workforce management functionality to assist in the strategic scheduling of staff. Throughout its fleet of more than 80 vessels, Norled manages drastically different staffing requirements as each boat is effectively its own business, needing different competencies, skills and personnel. This management was previously achieved by a complex mixture of a heavily customised payroll system, Excel worksheets and in-house software. This led to a large degree of manual interaction, consuming time and exposing Norled to risk.

By replacing these systems with Infor CloudSuite HCM and integrating workforce planning and scheduling into self-service facilities on each boat, Norled expects to realise cost management savings, be more agile in securing the right staff for a specific vessel when responding to staff illness and holidays, and ensure full compliance with strict Norwegian maritime regulations.

The introduction of self-service portals for staff members is at the heart of these new processes. Infor CloudSuite HCM will allow personnel to manage their own profile online, logging their hours and requesting leave, as well as creating a company-wide picture of the skills available within Norled. There are strong drivers to encourage uptake – not just the strict regulations for rest time on board and GDPR, but also the fact that, at present, the processes for logging these hours is manual and time-intensive for the staff on the boats.

"We are an incredibly demanding customer, wanting the benefits of back office standardisation on the one hand, but then the flexibility to adapt to the different skill requirements of more than 80 individual vessels on the other," explains Linda Charlotte Jahren Mørch, senior HR advisor at Norled. "We already have a reputation as a technology leader in our field, so a cloud-based, digital transformation led by this staff-focused initiative is a natural development."

"This project contains a series of firsts," said Johan Made, general manager, Nordics, Infor. "Norled is the first European client that will implement the complete Infor CloudSuite HCM and this is the first translation of that CloudSuite into Norwegian. This really is a trail-blazing partnership in the region for Infor and Norled, and we look forward to seeing the results develop."

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Product News

Cadence Announces First-to-Market DisplayPort 2.0 Verification IP

26 June 2019

Cadence Design Systems, Inc. announced the availability of the industry's first Verification IP (VIP) in support of the new DisplayPort 2.0 standard. The Cadence® VIP for DisplayPort 2.0 enables designers to quickly and thoroughly complete the functional verification of their mobile, Audio-Visual and AR/VR system-on-chip (SoC) designs with less effort and greater assurance that the design will operate as expected.

The latest Cadence VIP for DisplayPort 2.0 has been architected to meet the specifications of the new standard—enhancing design verification productivity, ensuring high-quality designs and delivering maximum performance. The Cadence VIP for DisplayPort 2.0 offers the industry's most comprehensive protocol validation solution for DisplayPort designs and includes a configurable bus functional model (BFM), a protocol monitor and a library of integrated protocol checks to optimize verification predictability. Additionally, the VIP has been designed for easy integration into testbenches at IP, SoC and system levels, helping engineers reduce time to first test and accelerate verification closure.

Maurizio Paganini, EVP and COO at MegaChips, a highly innovative fabless semiconductor company in Japan, and a leading developer of semiconductors with expertise in analog, digital and MEMS technology, said: "Our team has successfully utilized the Cadence VIP for DisplayPort for previous versions of the specification, which enabled us to deliver advanced audio and video IP solutions for

personal computing, mobile and consumer AV devices. We are happy to see Cadence deliver VIP for the DisplayPort 2.0 specification. The DisplayPort 2.0 specification will be supported in our next generation of products for mobile computing, enterprise connectivity, gaming, AR/VR and AV streaming systems."

"By releasing the first-to-market VIP for DisplayPort 2.0, we're enabling early adopters to ensure their designs comply with the specification while achieving the fastest path to IP verification closure," said Paul Cunningham, corporate vice president and general manager of the System & Verification Group at Cadence. "We have been working closely with early adopters of the spec, which has enabled us to provide a solid and high-quality verification IP for advanced designs for automotive, mobile and machine learning applications."

The Cadence Verification IP portfolio, including the latest VIP for DisplayPort 2.0, is part of the broader Cadence Verification Suite and is optimized for Xcelium™ Parallel Logic Simulation, along with supported third-party simulators. The Verification Suite is comprised of best-in-class core engines, verification fabric technologies and solutions that increase design quality and throughput, fulfilling verification requirements for a wide variety of applications and vertical segments. The Cadence Verification IP supports the company's Intelligent System Design strategy, which enables system and semiconductor companies to create complete, differentiated end products more efficiently.

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IBM Unveils New Data Prep Tool Designed to Help Speed DataOps

28 June 2019

IBM today announced a new data preparation solution designed to help clients improve their dataops processes to get their data ready for AI quickly and efficiently.

Data preparation is an integral step in building machine learning and predictive models, but it's also one of the most cumbersome and time-consuming, leading many data scientists to devote up to 80 percent of their time to it.1 And while the quality of the data remains a critical factor in producing accurate models – and more accurate insights – the time-intensive process can stall AI projects.

To ease this process, IBM introduced today InfoSphere Advanced Data Preparation, a new solution designed to help clients transform raw datasets by formatting, structuring and enriching the datasets for analytic processing and standard reporting. Jointly developed with data prep software provider, Trifacta, the new InfoSphere solution is engineered to work in conjunction with clients' existing data environments, including data lakes.

Among its many features, the new InfoSphere solution includes an intuitive dashboard for visualizing the data prep process, including the progress of tracking data quality and lineage (where the data originated, and where it's been). With the resulting cleaned datasets, clients can move them into the business analytics tool of their choice.

InfoSphere Advanced Data Preparation resides on top of a client's data lake or data warehouse and provides automated transformation capabilities. Through the solution's self-service user interface, business users, as well as data scientists, can access, explore, prepare and enrich datasets for analytics. In addition to data prep, the tool is designed to empower users of all levels of technical expertise to generate business-ready data insights.

"When you have accurate datasets ready for AI, it serves as a launchpad for all sorts of new business capabilities," said Dumisani Mthimkhulu, Head of Data Asset Management Platforms, Standard Bank of South Africa Limited. "We can start making strategic decisions because our data is curated and it's trusted, and our data scientists can use it to build some really interesting and valuable models."

"Organizations across the board are looking to leverage data for strategic decision making. At the same time, we've seen analytics, machine learning and AI initiatives throttled by poor data quality, inefficient data preparation processes, and a lack of governance," said Adam Wilson, CEO, Trifacta. "We're excited to bring Trifacta's self-service approach to data preparation to an innovative platform like IBM Infosphere and Watson to empower a broad base of business users in IBM's ecosystem. This collaboration will empower organizations to accelerate data preparation for self-service analytics in a governed and centrally managed environment."

"The new InfoSphere solution adds to our growing stable of dataops services and capabilities that are designed to help organizations automate much of the cumbersome preparation work and get to the business of conducting data science and building AI models fast," said Daniel G. Hernandez, Vice President, IBM Data and AI.

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Introducing nTop Platform

1 July 2019

From the nTopology blog:

Four years ago, Bradley Rothenberg started nTopology in Lower Manhattan with the vision of enabling engineers to design extremely complex parts for additive manufacturing. Brad saw a gap in the engineering software stack: the CAD software available simply wasn't capable of handling complex geometry to the level that engineers (and 3D printing hardware) were demanding. In the first two years, some of the leading engineering brands in aerospace, automotive, medical and consumer goods became nTopology customers. We built a user count that's measured in thousands and learned a ton about the challenges and initiatives on their minds.

We learned from our customers that the faster they can design a better performing part the more innovative they can be – giving them the competitive edge to win new business. With this insight, we expanded our mission. Today we're focused on helping engineers to make the highest performing parts, faster. To achieve this we built nTop Platform, expanding our capabilities beyond lattice design to address the entire engineering workflow.

nTop Platform lets users do things such as lightweight parts with a variety of approaches that include lattices, gyroid infill, and topology optimization. Users can iterate faster by leveraging existing CAD or mesh data, built-in simulation, and nTop's ability to create reusable workflows in ways that traditional engineering software could never achieve. And across the board, our customers asked for the ability to automate processes and capture engineering knowledge. nTop Platform was built to address that request.

nTop Platform encapsulates years of work and draws from feedback from some of the most advanced CAD users in the world. Here's a quick taste of what we've built into it:

- An enterprise-grade knowledge sharing system, built to let engineers securely share engineering

workflows across their teams.

- The ability to automate highly-complex workflows from design concept through optimization, simulation, and build preparation. nTop Platform is built to encompass the full idea-to-manufacture process, and through its workflow automation tools it enables shockingly rapid iteration and reusability.

- A computational modeling environment that enables design complexity never seen before. nTop Platform's design tools represent a truly new generation in engineering software, allowing engineers to work both faster and more effectively, and create higher performing parts.

- A system that integrates seamlessly into existing engineering workflows. nTop Platform can import and export any CAD file you currently use, and has built-in integrations with the most powerful and popular modeling, simulation, and product lifecycle management software out there.

The two things that enable these breakthroughs are the team and the technology. The nTopology team is energetic, solution-oriented, and focused on helping our customers tackle the big engineering challenges of today. Just like our products, our team is centered on collaboration and leveraging the unique capabilities of each team member – and our lower Manhattan location has allowed us to build a world-class group of diverse thinkers.

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PTC Enhances Seamless Connectivity to Industrial Automation Assets

1 July 2019

PTC announced the release of the newest version of its Kepware® industrial connectivity software. Kepware is foundational to the industrial connectivity capabilities of PTC's market-leading ThingWorx® Industrial IoT platform, and now the KEPServerEX® 6.7 solution makes it easier than ever for users to connect to all industrial automation assets via a single, secure application. Enhanced connectivity for manufacturing and new features for secure server deployment allow enterprises to standardize industrial communications on KEPServerEX.

Connectivity to industrial automation equipment is critical to improving operational efficiency. Engineers often rely on a mix of commercial and home-grown connectivity tools to navigate complex and heterogeneous production environments. The increased complexity, cost, and bandwidth spent retrieving industrial data, instead of interpreting and leveraging it, has created a business need for a single, secure solution through which enterprises can connect all of their production assets. KEPServerEX 6.7's breadth of connectivity, reliability, and security features empower engineers to focus on process efficiencies and product improvement.

"Digital transformation requires secure, reliable, seamless connectivity to all industrial assets, which is a mandatory step in any operational improvement initiative," according to Craig Resnick, vice president, ARC Advisory Group. "KEPServerEX provides users with a single point-of-access solution that can be implemented quickly and easily to help empower industrial enterprises as they work to improve operational processes, enabling improved efficiencies, increased KPIs, and rapid ROIs. The improvements to the Torque Tool driver and the new security features in version 6.7 make

standardization even easier."

Recent updates focused on the manufacturing industry include new device connectivity for the most open, interoperable Torque Tool driver on the market. Torque tools are commonly used in discrete assembly operations, and KEPServerEX distinguishes itself as one of the only connectivity applications that seamlessly integrates with these assets. KEPServerEX provides data access to torque tools, as well as all other industrial automation assets, creating a single point of access for industrial software. The integration enables enterprises to decrease time and effort spent on software implementation.

KEPServerEX 6.7 also includes advanced security enhancements to address the rising rate of cyber-attacks on operations networks. To combat the risk of IP theft, downtime, and comprised safety, among other threats, PTC has expanded and enhanced its secure remote configuration tools, reaffirming the company's commitment to its Shared Responsibility Model. Version 6.7 also adds new security features to the ThingWorx Native Interface, allowing users to implement network best-practices when connecting to ThingWorx in the cloud or over a wide area network (WAN).

"As cybersecurity risks continue to become more sophisticated, we have continued to enhance the application security of KEPServerEX," said Abby Eon, general manager of Kepware, PTC. "Version 6.7 enables our customers to not only increase process efficiencies, but to do so with a solution that also helps reduce exposure to vulnerabilities and cyber-attacks."

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Simcenter FLOEFD v18.0: What's New?

1 July 2019

From the Siemens blog:

Good news for the Simcenter FLOEFD user community: Simcenter FLOEFD v18.0 has been released, learn what great new features have been released in v18.0 and are available for immediate download.

Simcenter FLOEFD v18.0 features a wide range of new thermal management and productivity enhancement related functionalities to support the design engineer interested in using computational fluid dynamics (CFD) inside Siemens NX, Solid Edge, CATIA V5 and Creo. Let's take a close look at them now:

New Battery Compact Models

The new battery compact model calculates the heat dissipation rate based on the electrical or electrical-chemical characteristics of battery cells. The two new models are:

- The Equivalent Circuit model: it represents a cell as a second-order resistor-capacitor (2RC) equivalent circuit model. The model inputs are OCV (open circuit voltage), resistance and capacitance values as functions of SOC and temperature.

- The Electrochemical-thermal coupled model: this model simulates thermal and electrochemical behaviors of the battery cell and requires the chemical properties of the electrolyte.

The heat dissipation rate should be applied to the cell in both models. The state of charge, voltage, current, and the temperature distribution can also be predicted (*requires the Power Electrification module*).

Increase Accuracy with Calibration

Since semiconductor package characteristics data used in the simulation can differ from the reality due to lack of knowledge about the internal structure, you can increase the accuracy of your data by using Simcenter T3STER. The market-leading thermal transient measurement system lets you obtain and use the true package internal structure and material properties to drive even more accurate simulation. In addition, the new Calibration mode in the Parametric Study functionality will search for package dimensions and material properties to fit the measured data (*requires Simcenter T3STER Auto Calibration module and Simcenter T3STER hardware test equipment*).

Flux Plot for New Insight

A great tool for getting insight into your design, the Flux plot shows the amount of heat going from one component to another (by conduction). The plot can also show heat transfer to the fluid via convection or radiation. In addition, you can group components to see the heat calculated for all grouped components. Lastly, refer to the pie chart to understand the balance of heat for incoming and outgoing heat.

Improved EDA Support

The disciplines of electrical and mechanical engineering are getting closer and closer so that engineers require a greater connection between their Electronic Design Automation (EDA) and Mechanical Design Automation (MDA) tools. With the latest release of Simcenter FLOEFD, the Simcenter EDA Bridge module now supports the IPC2581 (Rev B) and IDX (Prostep) formats. A new method to calculate effective thermal conductivity based on empirical data is also added (*requires EDA Bridge module*).

OneSim Co-Simulation

OneSim is a unique tightly coupled co-simulation workflow that enables a Simcenter FLOEFD model to be considered as part of a Simcenter Flomaster network. One or more Simcenter FLOEFD hydrodynamic boundary conditions are nominated for linking to the Simcenter Flomaster network. Once connected, a simulation instigated from within Simcenter Flomaster will solve both the FLOEFD model and the Simcenter Flomaster network concurrently, until the steady-state or transient convergence. Flow rates, pressures, and fluid temperatures will be communicated through the linked boundary conditions / hydraulic nodes throughout the solution process (*requires Simcenter Flomaster v9.1 product*).

Post-processing:

- Creating cut plots or flow trajectories has been made more streamlined. You can create a cut plot normal to a curve. This new option makes creating a section along the centerline of a tube or circular channel easier. Surface parameters can now be calculated in a section place and not only on the geometry surfaces. Simply select a plane, planar face or curve to calculate local and integral parameters in the section. Also, cut plots and surface parameters can be linked to the location of the cut plot. If a section plane divides the model into several closed contours, parameters can be calculated separately for each contour. Flow trajectories can start from linear or rectangular virtual objects (not a CAD geometry) which you can interactively move, rotate and resize in the graphics area.

- The new custom visualization parameter enables the use of logical expressions such as IF, OR, AND etc. as well as larger than and less than. This enables the plot of only specific criteria or the surface area these criteria apply to.

Watch out for Part 2 of this post and for additional information and a complete list of new capabilities, please go to the Support Center site (https://support.mentor.com) or read the release highlights file provided with the installation package.

To view the original post, including multimedia, please visit https://community.plm.automation.siemens.com/t5/Simcenter-Blog/Simcenter-FLOEFD-v18-0-What-s-New-Part-1/ba-p/605131

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Simcenter STAR-CCM+ 2019.2: What's New?

25 June 2019

From the Siemens blog:

Simcenter STAR-CCM+ 2019.2:

Communicate, inspire and innovate

The latest release of Simcenter STAR-CCM+ will not only increase your productivity through powerful native automation but also gives you the ability to instantly communicate the results of your simulations with information-rich videos.

Instantly create information-rich videos

Improve the quality of your engineering communication with the new Screenplay feature, which allows you to quickly and easily create pervasive information-rich videos from any Simcenter STAR-CCM+ scene. Using an intuitive "drag and drop" interface, you can now quickly animate and interpolate simulation views and visualizations. Screenplay brings your models to life and allows you to convey the context of simulations better, adding impact and improving communication of results to colleagues, clients, and leadership.

Script-free automation

Take automation to a whole new level using Simulation Operations, which allow you to build and execute a series of automation actions directly from the Simcenter STAR-CCM+ interface, without requiring the use of macros or external programming scripts. By making execution intelligence an integral part of the simulation pipeline, you can now seamlessly orchestrate the various execution aspects of simulation into a robust and repeatable process, and even drive complex simulations with the single click of a button.

Faster transient simulation

Halve the time of your transient simulations using the PISO solver. Transient CFD simulations of flow phenomena with small time scales, such as in-cylinder simulations, typically require a restrictively small timestep when using the SIMPLE algorithm. For these types of applications, the PISO algorithm brings a significant performance advantage, allowing you to maintain stability with a much larger time-step. In 2019.2, PISO has been enabled for in-cylinder simulations, delivering at least 2x faster run-times while retaining the same solution accuracy as previously achieved using SIMPLE.

Robust and efficient new adjoint solver

One of the most significant challenges of engineering is being able to understand how potential changes in geometry or flow features might influence the performance of your product or design. The new adjoint solver grants you unprecedented insight into the sensitivity of engineering objectives to changes in inputs, without the need to run multiple simulations. The 2019.2 adjoint solver delivers 2nd order accuracy, reducing memory requirements, improving convergence, and increasing robustness. Adjoint enables the optimization of heavy industrial applications such as automotive and turbomachinery.

Quickly assess combustion emission levels

Reactor networks are used to quickly determine the emission levels in applications such as gas turbine combustors, burners, and furnaces. First, a CFD simulation with a simple combustion model is run to determine the correct flame position and flow pattern. Next, detailed chemistry is applied to a reduced set of interconnected zones (reactor networks). This makes it possible to capture the long time-scales of emission production without having to run the full chemistry in all CFD cells, resulting in a 3-4x speed-up while delivering sufficient accuracy.

Couple to any 1D or System Simulation Tool

Bringing together system-level modeling with CFD allows engineers to leverage the best of both worlds: simulate a system's behavior over a wide range of operating conditions while at the same time accounting for the detailed 3D component behavior using CFD. Version 2019.2 now supports the Functional Mock-up Unit format (FMU) to enable co-simulation with any system modeling code/tool which supports the export of co-simulation FMUs according to the FMI standard 1.0 or 2.0 (including Simcenter Amesim).

Improved NX CAD connectivity

Expressions in NX that contain information about the CAD model relevant for your simulation (e.g., the center of gravity, surface area, etc.) can now directly be passed to Simcenter STAR-CCM+ using the Client for NX. This increases productivity with reduced reliance on scripts and broadens access to all expressions to extend the range of applications for both single point simulations and design exploration campaigns.

To view the original post with associated multimedia, please visit
https://community.plm.automation.siemens.com/t5/Simcenter-Blog/Simcenter-STAR-CCM-2019-2-What-s-New/ba-p/592720

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XTS Delivers on Promise of Linear Transport Systems and Mechatronics

2 July 2019

The eXtended Transport System (XTS) from Beckhoff Automation is now available in the U.S. The EtherCAT-enabled XTS offers paradigm-shifting capabilities for motion control and mechatronics by combining the advantages of proven rotary and linear drive principles into a new modular platform. With its compact and flexible design, the advanced mechatronic system can reduce machine footprint up to 50%. The XTS revolutionizes drive technology and promotes innovative, globally competitive machine concepts.

XTS contains all functions necessary to support efficient integration for motion control applications in

many industries. With attached mechanical guide rails, XTS motor modules feature directly integrated power electronics, EtherCAT communication and position measurement. An unlimited number of wireless XTS movers can be controlled with high dynamics at up to 4 m/s on extremely customizable paths. By harnessing the flexibility and scalability of EtherCAT, PC-based control and TwinCAT 3 automation software from Beckhoff, XTS enables flexible mass production down to lot size 1 for the smart factories of today.

"Through the capabilities of XTS, Beckhoff once again empowers engineers and machine builders to take leading-edge machine designs to the next step," said Kevin Barker, president of Beckhoff Automation LLC. "The launch of XTS in the United States will provide significant opportunities for customers in numerous industries to boost throughput, shrink machine footprint and increase flexibility while eliminating time-consuming mechanical changeovers. This mechatronic system will be a key innovation driver for all companies that use it."

Beckhoff establishes the new linear motion principle

The application possibilities of XTS are virtually limitless: Movers can accelerate, brake, position and synchronize themselves on the fly with automatic collision avoidance provided by TwinCAT 3 software. They can take up absolute positions and positions relative to each other; they can group themselves and accumulate; they can create clamping forces in motion, drive through curves and along straights, recover energy through regenerative braking and use both the return and outward paths for transport purposes.

This revolutionary linear motor principle unlocks new possibilities in drive technology:

- linear motor characteristics with unlimited movers on an endless path

- low machine footprint and power requirements

- simple implementation of complex handling and transport tasks

- low project engineering and assembly expenditure

The complete mechatronic system: XTS components

Simple XTS motor modules form a complete unit with the movers and guide rails. The desired geometries, lengths and radii are determined by the number and type of the components selected, with various options for 22.5-, 45- and 180-degree modules to enable circle, clothoid and S-curve designs as well as open straight segments. Motor modules contain electromagnetic coils and all other active functions necessary for operation. The only further requirements are a power supply and EtherCAT connection. Motor modules contain no moving parts and are thus not susceptible to wear.

The XTS movers contain magnetic plates that, together with the coils in the motor modules, generate propulsive forces. Movers absorb the attractive forces of the magnets on both sides and compensate for them. As a result, the rollers, composed of particularly low-wear plastic, can move at high speeds with acceleration greater than 100 m/s2. A mechanically robust encoder flag communicates mover position to the motor modules.

Intelligent material flow in packaging and assembly applications

XTS presents unlimited possibilities for applications across diverse industries. However, the system is particularly well-suited to high-speed material handling:

- optimize irregular product flows to constant intervals and speeds

- clamp and move products

- pick up, transport and discharge products

- manipulate products: lift out, close, rotate, screw on caps

- process products one at a time or in parallel in groups

- integrate with robotics in real-time via EtherCAT

With unparalleled capabilities in the linear transport system segment, XTS offers leading-edge functionality and competitive advantages for users in many industries.

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