CIMdata

PLM Weekly Summary

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CIMdata News

HCL Secure by Design Approach Accelerates Organizations' Digital Transformation (Commentary)

18 May 2020

Key takeaways:

Bringing a modern product to market requires a diverse set of skills to satisfy customer expectations and regulatory requirements.

Security risks are found in all aspects of business: the systems and platforms used to develop products and with the products, their connectivity, and operations. Managing these risks requires a strategy that can evolve as the threats evolve.

HCL has been providing product development services to leading companies for four decades helping them get products to market faster, at lower cost, and with advanced features.

CIMdata expects significant changes in how companies operate based on the response to the current COVID-19 pandemic. HCL's Fluid Digital Workplace helps retain productivity, while ensuring employee safety.

Getting the right resources in place to bring a product to market or quickly scale capabilities is a challenge that keeps executives up at night. The issues and horror stories of attempting to employ the right technical people is a common challenge CIMdata hears about every day from its industrial customers.[1]

CIMdata had the opportunity to converse via email with Mr. GH Rao, HCL's President of Engineering and R&D Services (ERS). Mr. Rao who holds a bachelor's degree in electronics and communication joined HCL in 1980. He initially worked on an R&D team developing hardware sub-systems for micro/minicomputers, later becoming chief architect of multi-processor systems. In the early 1990s he was responsible for leading technology adoption programs and engineering teams at the HCL-Hewlett Packard joint venture. In 1996 HCL Technologies was formed and Mr. Rao took on the challenge of building business lines around core engineering services like system and VLSI design services. Over the years he evolved the business to address industry verticals and added more services.

CIMdata: *It has been few years since HCL acquired Geometric. Can you talk about some of the successes you've had together as a consolidated group?*

GH Rao: HCL's acquisition of Geometric was a truly synergistic transaction. Geometric brought end-to-end capabilities in PLM consulting, system integration, and mechanical and manufacturing

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engineering to HCL which perfectly complemented our engineering R&D and digital offerings.

We have been able to successfully take our combined portfolio of offerings to newer segments. While Geometric had a strong presence in the automotive, aerospace, and industrial segments, HCL has deep presence in hi-tech, medical devices, and manufacturing. With this acquisition, HCL was able to market its product engineering and testing offerings to erstwhile Geometric customers—like in the case of a Japanese industrial major, where HCL expanded the engagement to provide services in embedded software, application development, AUTOSAR, ECU development, and digital connectivity solutions like M2M, etc. Today, HCL supports this customer across all major business units and is the preferred Engineering Services Provider for the customer. Similarly, we have made strong headway in expanding our PLM customer base into domains like hi-tech, medical devices, retail, and process industries by leveraging HCL's access to these customers. To give you another example, for one of our leading medical technology customers, we created a unified system for product development and design control across platforms through successful ALM-PLM implementation.

Apart from cross-selling, this acquisition has allowed us to deepen engagements and streamline operations within our common customer base. To give you another example, we are now supporting a leading European car manufacturer through its large-scale digital transformation by leveraging our combined service capabilities and automotive domain expertise.

The acquisition also brought a strong IP and product portfolio into HCL. Our Industry 4.0 practice has been supplemented by the technology that Geometric brought to HCL which has created a strong differentiation for us in this space.

CIMdata: *We are seeing many companies investing heavily to integrate the siloed engineering, manufacturing, and after sales functions to create world-class experiences for customers. What role does HCL play, as customers are trying to create digital threads and digital twins?*

GH Rao: Companies, especially in manufacturing have realized that integration of traditional silos of engineering, manufacturing, and after-sales is critical in the new customer experience era. The traditional building blocks and conventional workflows don't allow such flexibility.

Companies must implement product-level and process-level twins and tie them together digitally to unlock new value creation opportunities as well as streamline operations for improved efficiency.

However, such implementations are fraught with challenges like heterogeneous system landscapes, complex integrations, data flow across organizational boundaries, variations in data semantics, lack of uniform standards, etc. Organizations require a broad range of expertise, experience, and technology to successfully operate—and this is what HCL brings to the table.

Customers have already seen success with our approach. To give you an example, we operationalized a digital twin for a leading kitchen equipment manufacturer which was facing stiff competition in new markets. Our solution enabled the customer to grow revenue by unlocking new revenue streams. Another example is from a leading wind turbine manufacturer which saw a positive impact on efficiency through the predictive maintenance solution we implemented for them by creating digital twins of field-deployed controllers. The remote tracking and analysis of vital controller parameters also resulted in significant cost savings for the customer.

CIMdata: *Maintaining information security is critical as we evolve to larger eco-systems and connect different systems, platforms, and devices. Can you discuss some of the potential security challenges that organizations typically face, or should be careful of, as they embark on this journey?*

GH Rao: The biggest security challenge for a connected eco-system is that you are only as strong as

your weakest link. A single security breach in a remote device can make the entire eco-system vulnerable to a threat. As an organization, you may have a robust and mature security posture but what about the rest of the ecosystem? The situation is further complicated by the distributed nature of the devices, cloud platforms, supply chains etc. participating in the eco-system which make the creation of a unified approach to security challenging.

The key tenet of a successful eco-system is the ability to enable seamless information exchange across the entire landscape. However, securing this information exchange across organizational boundaries, insecure public and private cloud interfaces, remote low power sensors, and devices can be a big challenge.

Another challenge is that threats are evolving at an accelerated pace and with a level of sophistication never seen before. A significant investment in security may not necessarily lead to a proportionate decrease in risk as threats keep evolving.

Due to all these challenges, security can sometimes be seen at cross-purposes with the exact digital transformation that it is supposed to enable.

These challenges are different from the conventional security challenges that organizations used to face. Traditional security approaches will be inadequate to counter these challenges. Today's enterprises are much more dynamic and hence need a radically different outlook and a constantly evolving proactive security strategy.

CIMdata: *How can HCL mitigate or avoid potential digital transformation security issues, while at the same time achieving customer cost and time-to-market goals?*

GH Rao: Our "Secure by Design" approach is the key to tackling security issues in a digital transformation program. The aim is to create an end-to-end security apparatus encompassing infrastructure, cloud, applications, data, communications, devices, network, etc., to create a complete cyber-physical nexus of security across the entire ecosystem.

For this, HCL offers a full spectrum of security services from strategy to managed services to accelerate organizations' digital transformation without comprising on security.

To be truly secure, security needs to become a key consideration in the entire product design and development lifecycle so that every product is engineered for security. Security engineering is a special area of focus for HCL, especially device security which involves securing the devices from attacks, ensuring confidentiality and integrity of device data, and availability of the device. This has become critical in areas like medical devices and industrial equipment where regulations are making security compliance mandatory.

CIMdata: *What is the key message that CIMdata should be telling our joint clients about HCL?*

GH Rao: HCL is in a unique position to offer technical consultation and implementation services. We have over four decades of experience in working with global leaders across domains.

We have end-to-end capabilities in product and digital engineering with a proven record of creating world-class customer experiences—which makes us an ideal partner for organizations to begin and further their digital transformation journey.

CIMdata: *COVID-19 is impacting every part of our lives today. When we return to the "new normal," what will it look like? How will HCL be leading in this emerging environment?*

GH Rao: Global businesses across most industries are under immense pressure due to the global nature of the pandemic, as the world grapples with its high intensity and long duration. As the crisis looms, it

will fundamentally alter the business landscape and could accelerate the demand for a location-agnostic work approach via digital workplace services, collaboration platforms, and cloud infrastructure. Enterprises will move towards optimal utilization of their assets.

Enterprises will need to transform into 'Fluid Enterprises' that are flexible, agile, and connected. HCL Fluid Digital Workplace helps retain productivity, deliver equitable experience, and enable social distancing.

Also, securing information exchange across the ecosystem is a challenging issue. For this, HCL offers a full spectrum of security services from strategy to managed services to accelerate organizations' digital transformation without comprising on security. Telco's will aggressively invest in 5G due to greater need for connectivity and bandwidth.

Organizations will look to invest in technology enablers such as AI/ML, 3D printing, AR/VR, cloud, analytics, automation, as there would be increased focus on resilient supply chain and flexible manufacturing to cater to changing demands.

Demand for simulation and PLM will increase along with decentralized small manufacturing units near customers. Enterprises need to perform a cost benchmark and spend analysis to redefine their cost structure. Business models would be tweaked to take benefits of immediate opportunities to spotlight quick hits and assure immediate results.

Conclusion

CIMdata would like to thank Mr. GH Rao for the insights he provided in his responses to our questions. CIMdata has worked with HCL for many years and believes that their engineering and PLM capabilities provide critical services that industrial companies need to survive and thrive in local and global markets.

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Acquisitions

Accenture Acquires Byte Prophecy to Enhance AI and Digital Analytics Capabilities in Emerging Markets

18 May 2020

Accenture has acquired Byte Prophecy, an automated insights and big data analytics company based in Ahmedabad, India, to meet the growing demand for enterprise-scale AI and digital analytics solutions across the region.

The acquisition will add nearly 50 data science and data engineering experts, with a particular focus on insight automation, to Accenture Applied Intelligence. The move will deepen existing consulting and technology capabilities that help clients in areas such as data foundations and advanced analytics.

"Across industries, decision making has become more complex, and businesses are increasingly relying on advanced analytics and AI to ensure insight driven, rapid decision making," said Piyush N. Singh, Accenture's market unit lead for India and sales lead for Growth Markets. "Beyond advanced technology capabilities, Accenture brings our clients a co-innovation mindset, and in Byte Prophecy we found a partner with the right mix of technology and consulting skills, and a client-centric innovation culture."

Founded in 2011, Byte Prophecy has worked closely with Accenture Ventures since 2018 on open innovation efforts, collaborating and co-innovating with Accenture and its clients in Asia Pacific on advanced data and analytics projects.

"Our team has already been working with Byte Prophecy over the past two years, and together we've helped clients build the strong data foundations that are the cornerstone for successful AI adoption," said Athina Kanioura, Accenture's chief analytics officer and global lead for Applied Intelligence. "Officially making Byte Prophecy's people and capabilities part of Accenture is a testament to the shared vision of shared success we've seen in our joint efforts."

"Our experience working with Accenture has helped us better understand customer pain points and fine-tune our solution to respond with greater agility to clients' needs," said Mrugank Parikh, co-founder, Byte Prophecy. "The opportunity to become part of Accenture Applied Intelligence will enable us to jointly build stronger assets and expand our services to more clients in the emerging markets. We are excited about our journey ahead and are looking forward to exploring the wide opportunities this union will bring to our people and clients."

Accenture's acquisition strategy involves delivering on existing, as well as emerging client needs with speed and scale. Over the past year the company has made Applied Intelligence acquisitions in Australia, Spain, North America and the U.K. to enhance its portfolio of technologies and help clients across those markets scale AI.

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Accenture to Acquire PLM Systems (Italy)

19 May 2020

Accenture in Italy has entered into an agreement to acquire Turin-based boutique systems integrator PLM Systems. The acquisition will expand Accenture's capabilities to help clients improve how they generate, manage and benefit from product data in design, engineering and manufacturing.

Founded in 1996, PLM Systems specializes in designing and building information systems for product lifecycle management. Its clients are Italian and international automotive, industrial equipment, fashion and aerospace and defense companies. Product lifecycle management systems help companies manage all relevant information about a product from its inception to its disposal. Companies can use them in engineering and other functions to innovate and manage new products.

The acquisition of PLM Systems will boost Accenture's capabilities and presence in the market for digital engineering services. Its team will join Accenture Industry X.0 in Italy. This is the part of Accenture that uses digital technologies to continuously improve how industrial companies design, engineer and manufacture products and services and operate industrial facilities.

"Digital technologies like artificial intelligence are taking product lifecycle management to a new level. This offers industrial companies a huge opportunity to transform a core business function – engineering", said Nigel Stacey, managing director and global lead of Accenture Industry X.0. "PLM Systems' expertise and experience in product lifecycle management will allow us to help clients make the best use of their product data."

"PLM Systems will be a cornerstone of progressing Accenture's leadership in engineering digitization services," said Mauro Marchiaro, managing director, Strategy & Consulting at Accenture in Italy. "We will combine our Industry X.0 capabilities with PLM Systems' methodologies and solutions. This combination will allow us to make the industrial product development process more efficient and sustainable for our clients."

"We're excited to become part of Accenture," said Alberto Codrino, CEO of PLM Systems. "Its client base and global footprint will offer our team new opportunities to expand their skills and we can develop even better technology solutions for clients to innovate and manage new products".

The planned acquisition of PLM Systems is part of an overall growth strategy to expand critical skills and capabilities in strategic, high-growth areas. It is the fourth digital manufacturing advisory, services and solutions provider that Accenture has acquired recently. It is following Callisto Integration in Canada, Silveo in France and Enterprise System Partners in Ireland. Other recent acquisitions Accenture has made to strengthen its Industry X.0 business include German embedded software company ESR Labs, Dutch product design and innovation agency VanBerlo, U.S. product innovation and engineering company Nytec, and German strategic design consultancy designaffairs.

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Company News

Acnovate Corporation offers free access to its Qiwk suite of PLM accelerators for users of Windchill
19 May 2020

At Acnovate, we reaffirm our focus on the health and safety of our team members, customers and partners. Our thoughts and prayers go out to our community, friends and families impacted by coronavirus COVID-19 pandemic. We are committed to doing our part and continue to support users of PTC® Windchill® products and their needs.

In these uncertain times, organizations and teams, across the world increasingly rely on digital collaboration tools to stay connected. To support customers facing the new reality of remote work, Acnovate is offering free access to its Qiwk® suite of PLM accelerators to help product development teams to collaborate effectively while working remotely. Now, through the end of September 2020, companies can take advantage of our free access offer. We will continue to assess the needs of our customers and expand (or extend) to include more products and services.

 Our Qiwk® suite of PLM accelerators include,

Qiwk® Collaborator: making product development design communication across product development teams easier. Users can simply create a chat session with select team members on specific issues or contexts, which is directly stored in the PLM system. It helps boost productivity with responsive UI and one-click reply, even directly from your mobile device.

Qiwk® Analytics: a self-Service analytics/reporting platform that enables business users to directly deliver insights from enterprise/PLM data with visual analytics in near real-time. It expedites visibility of emerging patterns form new data through analytics using KPIs, dashboards, detailed and ad-hoc reports. The use case-based solution can be tailored the team's unique business needs.

Qiwk® Mobile: helps users access PLM data, manage tasks, workflows and add markups conveniently form their Mobile device. Users can access critical data while maintaining security, monitor and approve key changes within the PLM system.

In Addition to free access to Qiwk® PLM accelerators, we are announcing our "Keep Your Lights On" (KYLO) program to support PTC® Windchill® customers. Under the KYLO program, accepted customers will receive 10 hours of free support per month towards PLM system support and maintenance.

To get access to Acnovate Qiwk® PLM accelerator solutions or to our KYLO program, contact us at kylo@acnovate.com.

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Ansys, Microsoft, Dell and Lendlease Unite to Expedite Digital Twin Adoption

19 May 2020

To help accelerate the adoption and implementation of physics-based digital twin technologies across multiple industries, Ansys is joining Microsoft, Dell and Lendlease on the steering committee of the Digital Twin Consortium. The Consortium represents an international ecosystem of pioneering technologists that are influencing digital twin development, usage and standards requirements.

Physics-based digital twins — virtual models of a process, product or service that allow for data analysis and system monitoring via simulations — are invaluable to operators, helping them monitor maintenance needs, sustainability, efficiency and performance to generate predictive and actionable insights. However, a lack of common standards and terminology make industry adoption of digital twins difficult for many organizations.

As a founding member of the Consortium, Ansys will play a leadership role for influencing requirements for new digital twin standards and will be instrumental for creating a unified terminology to simplify digital twin adoption. This will help speed the implementation of digital twin technology across a wide ecosystem of companies in sectors ranging from aerospace and defense to manufacturing to natural resources.

"Ansys is at the forefront of global digital twin innovation, making it easier than ever for customers to adopt digital twin technologies," said Dr. Richard Soley, executive director, Digital Twin Consortium. "Their input will prove vital for helping our team drive digital twin adoption, enabling end users to capture more revenue streams, create advancements to current processes, products and services and rapidly generate new business."

"Joining the Consortium's distinguished steering committee signifies a critical milestone in Ansys' work to radically advance digital twin development and further its safe and efficient deployment across our customer base," said Prith Banerjee, chief technology officer, Ansys. "We look forward to collaborating closely with Microsoft, Dell and Lendlease to align best practices, standards and architectures in this space and help blaze a path for customers to improve product reliability, increase speed to market, reduce physical testing needs and enhance product design."

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AVEVA and Schneider Electric deliver innovative solutions for the data center market

19 May 2020

Schneider Electric and AVEVA announced their expanded partnership to deliver innovative solutions for the data center market.

As hyperscale providers build data centers with an expanding fleet to meet worldwide demand, the complexities to operate and maintain these facilities are creating an unprecedented set of challenges. Operating at this scale requires a different approach for mission critical facilities powering the globe's digital infrastructure. The combination of AVEVA™ Unified Operations Center, scalable industrial software with Schneider Electric's EcoStruxure™ for Data Centers control and monitoring capabilities enables both deep and expansive visibility to day-to-day operations.

The new joint solutions provide a homogenous view of engineering, operations, and performance across a heterogenous, legacy installed base. Hyperscale data center providers will benefit from this partnership by connecting platforms and data sets that previously existed in disparate systems. They will also be able to scale regardless of number of sites or global location. Data center staff will be empowered to make faster, more informed decisions and optimize asset and operational efficiency throughout the data center lifecycle. As a result, data center providers can deliver a globally consistent experience to address the expanding digital infrastructure needs of their clients.

"At a time when the world's digital infrastructure is being pushed to its limits, Schneider and AVEVA are delivering a comprehensive solution for hyperscale data centers to operate and maintain their critical environments," said Pankaj Sharma, Executive Vice President of the Secure Power Division at Schneider Electric. "The solution can take data that has long been managed at individual data centers, often in siloed sub-systems, normalize it across multiple sites and can ultimately inform and provide enterprise level IT/OT/IoT integration to deliver real-time decision making. The complete solution will deliver operational efficiency and a more reliable data center fleet."

"AVEVA and Schneider Electric's unique partnership is already delivering tremendous value for our industrial customers across the board," said Craig Hayman, CEO, AVEVA. "It is a major strategic milestone for us to extend the partnership into new markets and reach more clients, combining AVEVA's strong heritage of delivering end-to-end unified solutions with Schneider Electric's deep data center expertise and global execution capabilities. Our joint customers are empowered by the standardized systems and processes resulting in improved workforce efficiency across multiple sites and the entire enterprise."

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Bentley Systems Adds Infrastructure Industry Experience to Digital Twin Consortium

21 May 2020

Bentley Systems, Incorporated has joined Digital Twin Consortium at the "Groundbreaker" level. Digital Twin Consortium was formed by non-profit trade association Object Management Group® with Ansys, Dell, Lendlease, and Microsoft, creating a global ecosystem of users who are accelerating the digital twin market and demonstrating the value of digital twin technology. As the authority in digital twins, the consortium brings together industry, government, and academia to drive consistency in the vocabulary, architecture, security, and interoperability of digital twin technology. Digital Twin Consortium aims to influence the direction of digital twin technology development, become the focal

point for digital twin thought leadership, and promote, evolve, and refine digital twin best practices and benefits.

As a groundbreaker member of the consortium, Bentley will help set de facto technical guidelines and taxonomies, publish reference frameworks, develop requirements for new standards, and share use cases to maximize the benefits of digital twins. Bentley will be working alongside other early innovators, including the U.S. Air Force Research Laboratory and New South Wales Government.

Bentley's collaboration with Digital Twin Consortium and its global ecosystem of digital twin users underscores its commitment to advancing an open-source platform for digital twins, which began with its release of iModel.js at its Year in Infrastructure 2018 Conference.

• iModel.js is the first and only open source library available on GitHub for accessing, creating, visualizing, analyzing, and integrating the data associated with infrastructure digital twins.

Bentley has since expanded its digital twin offerings to include:

• iTwin Services, which enable digital information managers to incorporate engineering data created by diverse design tools into a living digital twin with no disruption to their current tools or processes; and

• PlantSight, a digital twin for process industries, which brings together plant data and operating information into a single "pane of glass" accessible from anywhere 24/7 using a standard web browser.

Adam Klatzkin, vice president, business development – iTwin Services for Bentley Systems, said, "Infrastructure professionals are quickly catching on to the significant gains that can be realized by digital twins. We believe that no one vendor will be able to satisfy the myriad requirements and potential applications of digital twins that will emerge over the next five years. No one knows what a digital twin is going to be five years from now, but it is a safe bet that it will be connected to more systems than is possible today. Users want the flexibility to change as requirements change and as new things become possible. In software terms, that means being open. It is important for organizations to take an open approach when they are selecting digital twin technologies to work with. Open wins."

"We are delighted that Bentley will bring its infrastructure industry and open-source expertise to our global ecosystem of Digital Twin Consortium members," said Dr. Richard Soley, executive director, Digital Twin Consortium. "We look forward to working with Bentley to advance the use of digital twin technology across industries."

Digital Twin Consortium is The Authority in Digital Twin. It coalesces industry, government and academia to drive consistency in vocabulary, architecture, security and interoperability of digital twin technology. It advances the use of digital twin technology from aerospace to natural resources. Digital Twin Consortium is a program of Object Management Group. www.digitaltwinconsortium.org

Gerber Partners with 3DLOOK to Offer Unique Digital Customer Experience

21 May 2020

3DLOOK and Gerber Technology are proud to announce their partnership and integration to offer a fully-connected, digital remote supply chain experience. In a retail world in which fit is essential and working remotely due to the COVID-19 situation is the new normal, this partnership will facilitate consumers receiving personalized, high-quality garments by leveraging a fully connected, on-demand workflow.

To support demand from smaller, made-to-measure companies whose businesses have relied on the traditional way of measuring customers in person, 3DLOOK has developed a special package with very

quick and easy integration. The goal of the integration is to give small businesses the digital tools they need to operate online and meet customer demand, all while remaining digitally competitive and forward-thinking in an era that requires constant technological evolution, regardless of business size.

"We are incredibly proud to partner with 3DLOOK to offer worldwide brands and retailers a fresh, digitally innovative way to collaborate. For companies to truly offer their customers the best quality products, they need to ensure that their clothes fit perfectly.

Ketty Pillet, VP of Marketing at Gerber Technology

The Body Data Platform maps body data to product data, transactional data, and product return data to deliver analytics related to measurement, shape, 3D model accuracy, and fit, as well as customer profile insights through a dynamic dashboard. Customers take two photos while fully clothed, and a computer vision algorithm then detects the human body and renders 3D models and body profiles. The algorithm measures the 3D models to compute 65 ISO-compliant measurements. By using 3DLOOK's platform, customers can easily understand how the garment will fit on their unique body shape.

For many consumers, fit is a deciding factor in choosing which brands to buy from. In fact, according to Mintel, 81% of consumers who buy clothes that fit right are much more likely to buy from that brand again. It is critical for today's fashion companies to prioritize fit in their design process to eliminate guesswork for their customer and reduce the number of returns. 3DLOOK's Body Data Platform provides the insights and analytics to help brands optimize their fit and grading systems from broad segmentation based on historical surveys to real-time segmentation focused on their unique customers.

"We see this partnership as the first step towards providing brands, manufacturers, and retailers with the digital tools needed to support a full end-to-end customization platform which meets the needs of customers increasingly focused on products personalized to their fit and preference and who also care about supporting more sustainable supply chains and business models. By integrating our widget into Gerber's "Made For You By You" flow we are enabling a simple way to digitize measurement capture and automate the workflow process." Whitney Cathcart, CSO & co-founder of 3DLOOK

Thanks to the newly-added 3DLook integration, visitors to the virtual Gerber Innovation Center can access Gerber's YOU website from anywhere in the world to customize garments to their individual fit preferences and measurements. These virtually customized garments can then be digitally brought to life — incorporating the customer's preferences — through Gerber's fully-connected microfactory, giving them a fully-realized, production-ready garment. Gerber's partnership with 3DLOOK will enhance the overall fit of the final garment, offering customers an even more personalized digital experience.

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HCL Launches Virtual Distributed Agile Framework to Accelerate Client Digital Transformation
19 May 2020

HCL Technologies launched the Virtual Distributed Agile framework to enable organizations to accelerate their agile digital journeys for globally distributed teams. This comes at a time when the COVID-19 pandemic has disrupted our established ways of working and forced organizations to operate with a largely remote workforce and partner network, setting the stage for a future of permanent remote collaboration.

While physical proximity will either be unavailable or severely limited, the post-COVID world will still necessitate enterprises to accelerate their digital transformation journeys. HCL has hence combined its deep experience of "scaled distributed agile" in large enterprises along with remote workforce

management to create the Virtual Distributed Agile framework.

HCL's Virtual Distributed Agile framework is an industry-leading Scale Distributed Agile framework and is capable of helping large enterprises ensure digital acceleration, even with remote enabled workforce and partner/vendor network to deliver on all essential Distributed Agile attributes – rapid decision making, strong collaboration, close knit and self-sufficient teams, and fast execution.

Based on the three key tenets of culture, alignment, and engineering-led execution, the Virtual Distributed Agile framework provides organizations with an experiential framework to build their virtual, distributed agile teams. The framework defines and accounts for all key aspects including people (skill, personal well-being), process (metrics, visibility), tools (communication and collaboration), and talent (upskilling, knowledge sharing and management), enabling a seamless transition to a model suitable for the new reality.

IMDEA Materials and Hexagon to develop next-generation metal manufacturing and product design through 10X ICME

20 May 2020

e-Xstream engineering, part of Hexagon's Manufacturing Intelligence division, has announced a partnership with the IMDEA Materials Institute to support the industry's first microstructure modelling for metals within the 10X Integrated Computational Material Engineering (ICME) solution.

Integrated Computational Materials Engineering (ICME) is set to disrupt manufacturing as we know it. It is an engineering solution that spans across simulation disciplines and goes one step further in helping to tackle the challenges OEMs face in producing the 'perfect' part, whether that be time, cost or availability of data. It blurs the boundaries between materials engineering, design and manufacturing processes, optimising components through the integration of manufacturing, materials and performance prediction.

Renowned Madrid-based institute IMDEA Materials will contribute its expertise to improve the accuracy and scope of ICME in modelling metals' microstructure – a largely unexplored area for commercial manufacturing until now. Despite the maturity of metal engineering, most manufacturers do not currently take the material's microstructure into account when building parts, which can severely impact how the part behaves and withstands stress.

With more accurate models, OEMs can improve the quality of their metal components, reduce waste and devise more efficient, connected design and engineering workflows – all while performing the bulk of R&D in simulation to reduce the amount of prototyping and physical testing required. Optimising parts through more effective use of the source material will also help metal suppliers compete with newer materials such as composites and ceramics.

Roger Assaker, CEO of e-Xstream engineering, said: "The breadth and depth of the Hexagon 10X ICME solution is what will help it revolutionise the manufacturing industry. Today, it's driven by polymer-based composites, but with the help of partners like IMDEA Materials – a true pioneer in the field – we intend to apply the benefits of ICME to improve design and innovation using any material that has under-exploited properties and can help manufacturers make better products.

IMDEA Materials performs research into cutting-edge material science and engineering, and is a mark of excellence in material advancement. Its unparalleled insight into the modelling of basic alloys' elasto-plastic behaviour at the crystal level will contribute to metal ICME by improving the Digimat multi-

scale modelling that underpins the 10X ICME solution.

Forming and shaping metal parts produces a variety of microstructures across the component, characterised by the grain size, shape and orientation. The integration of IMDEA Materials' models into the 10X ICME ecosystem will equip users with the power to understand why those structures form, and how they will affect the final part's performance. This intelligence can then be applied to enrich the solution's integrated design, engineering and testing capabilities and help manufacturers make informed choices early in the product's development – for example designing 3D print processes to improve the metal's properties.

Laurent Adam, R&D Director at e-Xstream engineering said: "Under our partnership with IMDEA Materials, we will continue to collaborate to enhance the building blocks for metals ICME. Currently, our R&D is focused on predicting how these advanced metals perform against certain stresses, like creep, as well developing efficient numerical methodologies to account for material degradation."

Ignacio Romero, Director of IMDEA Materials Institute, said: "Until now, ICME has largely been an academic exercise. One of IMDEA's pillars is to collaborate with industry, sharing our knowledge of advanced materials to increase competitiveness and maintain technological leadership, so we are delighted for our results to contribute to the first industrialised ICME solution – an approach our research has shown has great potential to further the manufacturing industry as a whole.

"Our researchers' expertise covers a wide range of simulation techniques at different scales, from the atomic level to the continuum, and is supported by high performance computing capabilities as well as state-of-the-art laboratories for microscopic characterisation and in-situ mechanical testing. We are looking forward to the results of our, Hexagon and e-Xstream's combined competences."

ModuleWorks Commits a Million

20 May 2020

The Aachen based CAD/CAM/CNC software powerhouse, ModuleWorks, is celebrating a special milestone with the millionth commit to its software version control system.

"This is a special day because it means we've improved, enhanced and extended our software 1,000,000 times."

David Plater, Technical Director of ModuleWorks

Founded as an independent CAD/CAM component supplier in 2003, ModuleWorks has grown rapidly into a 200 strong international team whose innovative software components and solutions are optimizing the quality and efficiency of manufacturing processes in over 500,000 seats of installed CAD/CAM and CNC software around the world.

Reaching one million commits is a reflection of this rapid growth and success and to mark the special occasion, ModuleWorks congratulated its software developer who made the landmark revision. The lucky winner is Emanuel Bahan who works in the ModuleWorks Bucharest office.

Emanuel joined ModuleWorks in 2006 and is a senior software developer in the integration team that helps customers to integrate ModuleWorks technology into their software solutions: "It's fun to be the one million man", laughs Emanuel. "I'll see you all again soon for the two millionth commit".

PROSTEP awarded Industriepreis

19 May 2020

PROSTEP's OpenDXM GlobalX has once again been awarded this year's Industriepreis (Industry Award) by the "Initiative Mittelstand" as one of the best products of the year. In addition to concrete improvements such as the intuitive web interface and blockchain integration, the innovative capabilities of the software, which can now also be used as a service from a highly secure cloud infrastructure, where the main reasons for the jurors choosing PROSTEP's solution.

The Industriepreis is awarded annually by the publishing house Huber Verlag für Neue Medien in recognition of the economic, environmental, technological and social benefits offered by innovative industrial products in a variety of categories. This includes, among others, IT and software solutions that help simplify and automate processes and workflows in industrial companies. The products and solutions are evaluated by an independent jury of experts comprising professors, scientists, industry representatives and trade journalists. The award ceremony is usually held during the Hanover trade fair (HMI), but due to the COVID-19 pandemic, this year's awards had to be delivered online.

"OpenDXM GlobalX has become synonymous with secure data exchange," said Udo Hering, head of Project Management at PROSTEP, commenting on the Award. "By integrating blockchain technology, we have laid the foundation using the solution in new fields of application in which the authenticity of the exchanged data and its monitored use for the intended purpose must be guaranteed." The new interface makes it easier for both users and administrators to utilize the data exchange platform, which can be used as software as a service (SaaS) from the cloud with no installation effort.

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Ruledesigner: A reflection on the dynamics that are overwhelming us

18 May 2020

In recent times, the social changes that are taking place are causing upheavals in the consolidated paradigms of the working organizational methods.
In this framework, the possibilities offered by collaboration tools are consolidating new trends in terms of working methods, also due to companies struggle to find resources and skills in some geographical areas as well as globalization, not only as market expansions but in terms of employment, too.

The above-mentioned conditions make possible, for several years now, to develop distributed work, or its "subset" which has recently become very famous with the term "smart working".

Nevertheless, only the impact of an "epochal" phenomenon such as the Covid-19 outbreak, which lead to the recent lock-down on a global scale because of health reasons, makes possible to accelerate the process for adopting this working method. Indeed, in a much shorter time than what was conceivable even just 3 months ago, distributed work is turning from being possible, to temporarily desirable, till definitively indispensable in all those situations/industries where physical presence it is not necessary.

Based on this, we are getting used to decide day by day, circumstance by circumstance, how and where we want to carry out our daily work.
By the way, distributed work is not simply working remotely. It means organizing a solid mode for collaborative work where everyone is able to fully perform its functions while being organized in virtual working groups that collaborate from multiple areas and according to different operational modes.

Ultimately, this is an approach that goes beyond the concept of work organized in individual "silos" carried out remotely, in favour of a globally distributed context where collaboration among the corporate

stakeholders becomes the pillar of the organization.

Thus, the technology available to companies becomes the means, the enabling tool, to be able to achieve this paradigm.

In conclusion, the key to win this challenge for the future, which has now become present, and be able to effectively respond to the change is embracing innovation with conviction and determination. We don't have to be scared about the events we are experiencing. We have to adopt a positive vision and turn adversity into an opportunity to re-think about the organization: it is important to prioritize the implementation of Digital Transformation programs and start modelling companies and organizations on business processes relying on adequate infrastructures capable of enabling, promoting, supporting and making persistent (= resilient) this transformation, that must be able to be implemented in a gradual and scalable way.

"This is where solutions like RuleDesigner come in" affirms Gianfranco Biguzzi, CEO of the company.

"RuleDesigner is, for over a decade, entirely web-based and, therefore, operating on common browsers. Its peculiarity is that of bringing together in the application effective tools for the execution of relationship activities and the traceability of asset-related information with tools to support collaborative work in a simple and distributed way.

In detail, we can say that RuleDesigner is an enterprise collaborative platform that enable, promote and support social collaboration amongst the company teams in order to make business processes in the domain of Product Lifecycle Management (PLM) and Business Process Management (BPM) efficient.

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Events

 ShareAspace Forum 2020 Registration Now Open

21 May 2020

Are you improving your company's supply/value chain?

Register to ShareAspace Forum 2020 webinar to learn about:

An engineering supply chain solution that is quick to deploy and flexible with Eurostep's SaaS offering.

A PLM collaboration solution with no implementation time – out of the box.

The best practice implemented of the Design to Manufacturing SaaS.

Are you an Export Control Officer or a Programme Manager?

Attend our forum to learn how to share engineering data subject to export controls & how ShareAspace can support any business dealing with licensed data.

Find out why ShareAspace is an important and essential solution worth consideration for all PLM professionals:

How does ShareAspace help purchasing to meet business requirements for complete and correct digital deliverables from suppliers?

How does ShareAspace supports joint ventures, mergers and acquisitions and protects your engineering Intellectual Property?

Is ShareAspace complementary to what the big PLM, ERP and MRO vendors offer?

How is Eurostep leading the way in moving PLM collaboration into the cloud?

Can ShareAspace consolidate both structured and unstructured product data?

How does ShareAspace add value to your Microsoft and Azure investments?

AGENDA (CEST):

14.00 – Introduction and housekeeping rules

14.05 – Business update

14.20 – ShareAspace Design to Manufacturing SaaS

14.45 – ShareAspace Export Control

15.00 – Break

15.05 – Q&A

15.15 – ShareAspace cool features

15.30 – ShareAspace updates and looking ahead

15.45 – Q&A and wrap-up

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Financial News

L&T Technology Services reports 11% revenue growth in FY20

21 May 2020

L&T Technology Services Limited announced its results for the fourth quarter ended March 31, 2020. Highlights for FY20 include:

• Revenue at ₹56,191 million; growth of 11%

• USD Revenue at $786 million; constant currency growth of 9.3%

• EBIT margin at 16.5%; up 50bps • Net profit at ₹8,186 million; growth of 7%

• Board has recommended a final dividend of ₹13.50 per share Highlights for Q4FY20 include:

• Revenue at ₹14,466 million; growth of 8% YoY

• USD Revenue at $195.4 million; growth of 3.4% YoY in constant currency

• Net profit at ₹2,048 million; growth of 7% YoY During the quarter, LTTS won 9 multi-million dollar deals across all major industry segments which includes one deal with TCV of USD30mn plus.

On a YoY basis, LTTS has increased its USD20mn+ clients by 3 and its USD10mn+ clients by 5. "We closed FY20 with 11% revenue growth accompanied by an improvement in operating margin despite multiple headwinds through the year – starting with Telecom & Hitech segment in Q1FY20 and ending with Covid-19 in Q4FY20.

While Covid-19 is an ongoing challenge, we have continued to be the reliable and preferred partner to our customers while at the same time taking care of the health and safety of our employees. In response to the pandemic, LTTS has rolled out a suite of digital offerings, including i-BEMS Shield for safe workplaces and Frugal Manufacturing to help enterprises transfer or prioritize their manufacturing & production lines.

The near-term outlook for the world economy appears uncertain as a result of the fallout from the global pandemic, however we see this crisis accelerating the trend of customers seeking credible partners who

bring capability and speed-to-market. We believe this will lead to greater consolidation and enable us to expand engagement scopes once customers adjust and redraw their business plans under a new normal.

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Synopsys Posts Financial Results for Second Quarter Fiscal Year 2020

22 May 2020

Synopsys, Inc. reported results for its second quarter fiscal year 2020. Revenue for the second quarter was $861.3 million, compared to $836.2 million for the second quarter of fiscal 2019.

"Synopsys continues to execute well. We delivered excellent second quarter results, including revenue, non-GAAP earnings per share and operating cash flow that exceeded our targets. Our innovation continues at a rapid pace, as we introduced several exciting new products in the quarter," said Aart de Geus, chairman and co-CEO of Synopsys. "Even as the world grapples with unprecedented challenges, chip and system design activity remain robust. With a resilient business model and strong balance sheet, Synopsys is well-positioned to reaffirm our 2020 revenue and non-GAAP operating margin guidance and raise our non-GAAP earnings-per-share and operating cash flow targets."

GAAP Results

On a generally accepted accounting principles (GAAP) basis, net income for the second quarter of fiscal 2020 was $109.9 million, or $0.71 per share, compared to $118.2 million, or $0.77 per share, for the second quarter of fiscal 2019.

Non-GAAP Results

On a non-GAAP basis, net income for the second quarter of fiscal 2020 was $188.3 million, or $1.22 per share, compared to non-GAAP net income of $178.1 million, or $1.16 per share, for the second quarter of fiscal 2019.

For a reconciliation between GAAP and non-GAAP results, see "GAAP to Non-GAAP Reconciliation" and the accompanying tables below.

Business Segments

Synopsys reports revenue and operating income in two segments: (1) Semiconductor & System Design, which includes EDA tools, IP products, system integration solutions and associated services, and (2) Software Integrity, which includes security and quality solutions for software development across many industries. Further information regarding these segments is provided at the end of this press release.

Financial Targets

Synopsys also provided its consolidated financial targets for the third quarter and full fiscal year 2020. These financial targets assume that the current U. S. government "Entity List" restrictions remain in place for the rest of the fiscal year. These targets constitute forward-looking statements and are based on current expectations.

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Implementation Investments

Adrian Jules Digitizes their End-to-End Workflow with Gerber Technology

18 May 2020

Adrian Jules Ltd, an established bespoke design house and tailoring outfit based in Rochester, NY, has transformed their 55-year-old business offering the finest hand-made garments in America through a deep and personal partnership with Gerber Technology, the industry leader in the apparel and textile technology space, by digitizing their entire process -- from design to cutting -- by integrating Gerber Technology's AccuMark® 3D & 2D CAD software, Gerber's AccuNest™, and the GERBERcutter® Z1 for production-ready, made-to-measure garments.

Darren Beaman, Senior Director of Technical Design and Production Director, outlined how they transformed their business and found the ultimate balance between old-world tradition and cutting-edge technology including 3D. With a 10% savings in material utilization and 75% time savings for faster manufacturing productivity, Adrian Jules sees embracing technology as a no-brainer. Mr. Beaman added, "we've gone from 20 samples per year, down to 5," representing a significant cost savings for the company.

3D has not only been instrumental in bringing the business into a brand-new technological era, but it has also been crucial to operations due to the present day geopolitical challenges of COVID-19. In a matter of days, Adrian Jules was able to convert to mask and PPE production -- all with the aid of AccuMark 3D. Thanks to embracing Gerber's end-to-end technology, Beaman was able to bring Adrian Jules to the front lines of the important fight against the current pandemic.

"55 years ago we used paper, pencil and old wooden rulers...now, we're using the most innovative technology available to the industry. For someone who is a technical director, this is very exciting for me" said Beaman, commenting on their success in adopting Gerber's suite of end-to-end solutions. "We've been working with Gerber for over five years. I feel privileged to be part of the Gerber family and am excited to see AccuMark 3D and it is so easy to use."

Adrian Jules now attributes their success to being a tech-forward company, while still maintaining the core values put in place by its founder generations ago.

Gerber Technology offers end-to-end solutions for soft goods and apparel manufacturers looking to save money, time, and the environment. With over 50 years of experience, Gerber has come to be known as the go-to-market leader for companies looking to effectively digitize and connect the entire supply chain, all the way from design, product development and production to retail. Mary McFadden, Vice President, CAD Product Management at Gerber Technology noted that "Gerber and Adian Jules are the perfect pairing of talent, as well as tradition, with over 100 years of combined industry experience and backgrounds in traditional manufacturing."

Speaking to the tradition of excellence at Adrian Jules, Alexa Roberti, Director of Sales, explained: "My grandfather started this company with the dream of delivering the finest hand made garment in America, and that's actually our mission statement today." Roberti also stated that "we are proponents of technology here at Adrian Jules, and we really see Gerber's AccuMark 3D assisting not only in sustainability but giving us flexibility when we need to develop patterns."

China National BlueStar Chooses Aspen Technology Software to Accelerate Digitalization

19 May 2020

Aspen Technology, Inc. announced that China National BlueStar (Group), known as BlueStar, a Chinese chemical company focusing on new materials, has chosen Aspen Mtell® and Aspen ProMV™ asset performance management (APM) software to accelerate digital transformation at more than 10 manufacturing sites globally. With this planned deployment, BlueStar can achieve operational excellence, leveraging models that take advantage of artificial intelligence (AI) and machine learning.

Harry Ni, Chief Technology Officer, BlueStar, said: "To stay ahead in the global manufacturing industry, BlueStar has selected Aspen Mtell and Aspen ProMV software as part of the company's asset performance management strategy to deploy AI and machine learning capabilities. This broadened partnership between AspenTech and BlueStar comes after the 2018 agreement for both companies to collaborate in the areas of Engineering and Manufacturing and Supply Chain software."

Jack Ding, Country Manager of Greater China, Aspen Technology, added: "This partnership will enable BlueStar to achieve significant production improvements throughout its specialty chemicals business. Early prediction of process deviations allows the avoidance of product quality issues and the mitigation of unplanned downtime via predictive and prescriptive analytics on all its critical equipment assets. By accelerating its digital transformation journey, BlueStar is well placed to capitalize on global market opportunities in a volatile, uncertain, complex and ambiguous (VUCA) world."

Aspen Mtell mines historical and real-time operational and maintenance data to discover the precise failure signatures that precede asset degradation and breakdowns, predict future failures and prescribe detailed actions to mitigate or solve problems. Aspen ProMV multivariate analysis creates a model that makes it easier to visualize and interpret data. Plants can quickly identify what drives variability among the hundreds or thousands of variables in processes. Together, Aspen Mtell and Aspen ProMV help companies achieve their strategic digitalization goals.

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EIZO Corporation Selects the Aras Platform to Respond to Rapidly Changing Business Requirements

22 May 2020

Aras announced that EIZO Corporation, a Visual Technology Company that provides high-quality, high-performance visual equipment and visual solutions, has selected the Aras platform to increase its ability to adapt to business changes and support mass customization for its customers.

EIZO looked to foster innovation and agile practices to meet customer demands and stay ahead in today's fast-paced business climate. Their current infrastructure and processes lacked the functionality and flexibility required to keep up with their evolving business strategies. They launched a digital transformation initiative to improve internal productivity and enhance responsiveness to business changes. Through extensive market research, EIZO selected the Aras platform to accelerate their initiative, and will leverage Aras' adaptability and flexibility to meet their ever-changing business requirements. They hope to elevate their business strategies by strengthening their ability to respond to their customers' product customization needs and continuously benefit from each feature that the platform has to offer.

EIZO plans to use the Aras platform to manage engineering projects and documents, engineering bill of materials (EBOM), manufacturing bill of materials (MBOM), workflows, and process designs. It will also manage the bill of materials (BOM) transfer to enterprise resource planning (ERP) systems and the

bill of process (BOP) connection with the manufacturing execution system (MES). EIZO leveraged implementation partner, Hitachi Systems, to assist with a wide range of technical support, including compliance with laws and regulations essential to manufacture medical devices, technical documentation, and workflow management.

"Flexible and open in nature, the Aras platform gives users the ability to quickly address business needs by easily adapting to new processes – adding even more value to their current systems," says Masahiko Hisatsugu, President of Aras Japan. "Aras is proud to support EIZO in their digital transformation initiative by offering a single platform to meet their digital manufacturing needs now and into the future."

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Gerber Empowers Nine Line to Produce Thousands of Medical-Grade Masks per Day

22 May 2020

Nine Line Apparel has partnered with Gerber Technology and Top Value Fabric to develop several types of protective masks to ensure the health and safety of millions. The global shortage of personal protective equipment (PPE) has put millions of lives at risk, including first responders, military members, essential workers, and those that are immunocompromised. With many masks out of stock and prices escalating rapidly, it has been incredibly difficult for consumers to get the protection they need.

"We are so proud to support our customers in every way possible as they develop creative and innovative solutions to the current PPE shortage," said Pete Doscas, VP and General Manager Americas of Gerber Technology. "Nine Line Apparel is working tirelessly to ensure everyone has access to effective protective equipment that they can be sure is going to keep them safe."

Nine Line Apparel is an American lifestyle brand founded by patriots for patriots. In the military, a Nine Line is a medevac request for a soldier that is injured on the battlefield and since 2012 the Georgia-based company has embodied the patriotism, hope, and trust that a Nine Line represents by supporting those in need and encouraging others to do the same.

When the COVID-19 pandemic began and caused a global shortage of PPE, Nine Line Apparel stayed true to their core values and immediately jumped in to protect the nation's heroes by producing several types of face coverings, including a 100% reusable, medical grade mask of medical grade TPE. The mask comes with a 10 pack of replacement filters to ensure breathable, comfortable and effective protection.

Nine Line contacted Gerber Technology to assist them in finding a state-of-the-art facility that would allow them to produce quickly and efficiently. After learning about Nine Line's needs such as fabric width, roll size, quantity, and packaging requirements, Gerber connected them with Integrated Textile Solutions. By leveraging two multi-ply GERBERcutters and a multi-ply GERBERspreader™ at the Integrated Textile Solutions facility, Nine Line is able to produce 2,000 masks and 100,000 replacement filters per day with the capacity to produce up to 5 million masks and 50 million filters in one month.

"The only way we're going to get through this pandemic is if everyone works together and we are so lucky to have such an amazing network," said Tyler Merritt, CEO of Nine Line Apparel. "Gerber has been incredibly helpful throughout this entire process by helping us find a facility to produce at and connecting us with our partners."

In addition to the reusable masks, Nine Line is also working with a fellow U.S. manufacturer to provide

consumers with a one-size-fits-all mask at cost. For each mask sold, Nine Line will be donating a mask to a frontline worker in need.

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OPTITEX Partners with YKK Zipper

20 May 2020

Optitex announced its collaboration with the YKK Group, one of the world's leading zipper manufacturers. YKK® products are available to Optitex users since recent version O/19.5.

Optitex customers will now be able to easily access and embed YKK 3D images from YKK's rich library of fastening products in their 3D models and enjoy the visual standards and rendering precision of YKK products. In addition, having the zipper data embedded in their design will enable customers to track the zipper model all the way to sourcing and inventory management later in the production process. This partnership will help fashion and apparel companies to create more accurate digital models of their products, collaborate more efficiently, get to market faster, and reduce production errors.

"We are thrilled by the incorporation of our high-quality zippers into Optitex's design process," said Takashi Tsukumo, Vice President, YKK Corporation Global Marketing Group. "We're proud that our partnership will deliver a sustainable and smarter workflow, saving our joint customers time and money."

Amit Ben-Sheffer, VP Products at Optitex, said, "We are continuously striving to expand our fashion and apparel toolset. The collaboration with YKK, a leading industry vendor, enriches our users' options and supports the level of detail and precision we are committed to delivering from design to production."

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Panasonic Adopts Synopsys Custom Design Platform to Accelerate Next-Generation Automotive and Industrial Products

22 May 2020

Synopsys, Inc. announced that Panasonic Corporation has selected the Synopsys Custom Design Platform for its total design flow to develop next generation analog and mixed-signal products after the completion of a rigorous technical evaluation and successful migration of legacy design flows and data. Panasonic has already begun design work with the Synopsys Custom Design Platform; it will be used by all Panasonic analog, mixed-signal and RF design groups world-wide.

"We selected Synopsys as our EDA partner to help us accelerate our spatial sensing solution and battery sensing solution for automotive and industrial market," said Hiroyuki Tsujikawa, Director at Panasonic Semiconductor Solutions Co., Ltd.. "Synopsys demonstrated that they could respond rapidly to our requirements, and we moved our legacy designs and design flows to Synopsys in just a few months."

Synopsys' Custom Design Platform is based on the Custom Compiler design and layout environment and includes HSPICE®, FineSim® SPICE, and CustomSim™ FastSPICE circuit simulation, Custom WaveView™ waveform display, StarRC™ parasitic extraction, and IC Validator physical verification.

Key features of the Custom Design Platform include reliability-aware verification, Extraction Fusion technology, and visually assisted layout. Reliability-aware verification ensures robust analog/mixed-signal (AMS) design with signoff-accurate transistor-level EM/IR analysis, large-scale Monte Carlo simulation, aging analysis, and other verification checks. Extraction Fusion technology with

StarRC parasitic extraction reduces design closure time by enabling accurate parasitic simulation before layout is complete. Visually-assisted automation is a pioneering approach to reducing layout effort that is proven to deliver higher productivity.

"Panasonic is one of several full-flow competitive displacements we've achieved this year from customers seeking better overall design productivity, industry-leading circuit simulation performance, and gold-standard extraction and simulation accuracy." said Aveek Sarkar, vice president, AMS customer success and product management at Synopsys. "We welcome Panasonic to our rapidly growing community of full-flow custom design customers."

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Product News

3D Systems Announces First-to-Market Enhancements to Reverse Engineering Software
19 May 2020

3D Systems is accelerating the transformation to digital manufacturing workflows with its extensive suite of software. By utilizing the company's software as part of their workflow, manufacturers can deliver high quality products with digital precision and speed - from digitization and design to manufacturing, inspection and production management.

3D Systems is continually innovating to enrich its products, and today is announcing new versions of Geomagic Design X and Geomagic Wrap, which include first-to-market capabilities that streamline workflows and empower designers and engineers with digital tools to achieve greater precision. Rooted in the company's "customer-first" approach to innovation, these enhancements to 3D Systems' industry-leading reverse engineering solutions are specifically developed to help manufacturers maintain competitive advantage by accelerating product development cycles – achieving faster time to market.

New Geomagic Design X Features Increase Efficiency with Improved Accuracy

3D Systems' Geomagic Design X combines robust 3D scan processing and complete CAD design functionality to enable faster, more accurate and reliable reverse engineering than possible with other methods. Using the software's newest features, engineers will benefit from streamlined modeling workflows as well as expanded modeling pathways for complex, revolved parts. With the release of Geomagic Design X 2020, engineers will have access to the following unprecedented new features:

Revolved parts with features have historically been very cumbersome to model as CAD software is using a two-dimensional environment to create three-dimensional, rotating parts with multi-axis features. The process often requires a great deal of trial-and re-work to get to a final part – often times sacrificing precision. The newest Geomagic Design X release includes an Unroll/Reroll function that enables a new modeling workflow to tackle these complex, revolved parts. Using a comprehensive suite of mesh processing tools, an engineer can unroll the mesh to automatically extract a 2D sketch, make the modifications needed, and then reroll the sketch for additional engineering. This feature reduces the need for multiple rounds of trial and re-work, dramatically improving part precision, efficiency and downstream usability.

Topology optimized parts and castings with precision features present unique challenges for repatriating a generative mesh, or 3D scan into CAD with intelligence. The new Selective Surfacing features in Geomagic Design X 2020 simplify the hybrid modeling process, providing easy workflows for

traditionally difficult parts with both organic and prismatic features. Selective Surfacing combines very fast organic surfacing with high precision feature modeling methods. This results in accelerated productivity while providing greater downstream CAD re-usability, and maintaining control over model accuracy.

Since its inception, 3D Systems has taken a customer-centric approach to innovation – collaborating with its customers to understand their application needs and developing solutions to address them. The company is further accelerating this approach by releasing a framework for early feature and capability preview. Through this framework, Geomagic Design X customers on-maintenance will be invited more efficiently into the R&D process - providing early access to innovations and the ability to share feedback. Additionally, this new plugin structure enables 3D Systems to quickly gather customer support requests – and in many cases more efficiently delivering support for customers' business critical needs. Shortly following the general release of Geomagic Design X 2020, on-maintenance customers will be directly invited to visit the company's new support site, and get access to the first Add-in pack delivered through this framework.

Geomagic Design X 2020 is planned for general availability in late May 2020.

Geomagic Wrap 2021 Includes Enhanced Automation to Accelerate Workflows

Geomagic Wrap provides the industry's most well-known toolset to transform 3D scan data and imported files into 3D models for immediate use in downstream engineering applications across a variety of industries. 3D Systems' latest release – Geomagic Wrap 2021 – includes features such as scripting automation and texture manipulation that accelerate designs; thus enabling faster time-to-market.

3D Systems' Geomagic Wrap is the only product in its class that includes scripting automation that enables engineers to work more efficiently. The latest release includes a new scripting editor that allows engineers to customize their workflow for their unique applications. The editor uses Python – an open source, widely used programming language with which many engineers are very familiar – to interact with the custom Geomagic Wrap accessible features. This has enabled a much simpler experience with new tools such as 'auto complete' and 'contextual highlighting' that accelerate the design of accurate, 3D surfaced models. These new features are complemented by enhanced API Documentation that will be live-hosted on the company's support site providing customers access to continuously updated documentation.

Geomagic Wrap 2021 includes new texture manipulation tools to streamline workflows involving color and texture scans. When an engineer scans an object that includes colors, logos or other complex visual elements in a scan-to-web workflow or digital asset creation, an additional software program is generally required to edit and re-touch these files prior to manipulating the surface textures. The latest release includes a more robust set of texture map manipulation tools to deal with complex geometries directly within Geomagic Wrap. Having these advanced capabilities included in the same program streamlines the workflow – enabling creation of higher quality and more logical texture maps for improved downstream usability - helping improve efficiencies and reduce design time

A new HD Mesh Construction method provides a powerful way to construct 3D data from point clouds. This can be a particularly challenging operation when dealing with a scan that is missing information, or for those that result in large data sets. HD Mesh Construction is designed to overcome these challenges, enabling engineers to create watertight meshes.

General availability of Geomagic Wrap 2021 is planned for late July 2020.

"3D Systems has the broadest reverse engineering software portfolio in the industry, which includes a variety of best-in-class products," said Radhika Krishnan, executive vice president, software, healthcare & digitization, 3D Systems. "Our Geomagic software combines robust 3D scan processing with CAD design functionality to help manufacturers expedite the product development cycle. With the new features we are introducing today, designers and manufacturers who have incorporated our reverse engineering products into their end-to-end workflow will be able to achieve unmatched speed and accuracy. We are committed to continuing this caliber of innovation which is enabling our customers to improve productivity, lower Total Cost of Operation (TCO), and maintain competitive advantage."

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Atos and Siemens introduce Digital Twin solution within the global pharmaceutical industry
18 May 2020

Atos and Siemens are working together with the pharmaceutical industry to improve production with an innovative solution based on a digital replica of the pharma production process. Currently being tested in the pharmaceutical industry, this innovative "Process Digital Twin" for pharma manufacturing – powered by IoT, AI and Advanced Analytics – is designed to provide improved efficiency and flexibility in the manufacturing of pharmaceutical products.

Based on the pilot study, this potentially disruptive solution opens up new opportunities, such as a sustainable process development – reducing overall experimentation time and waste, ensuring constant quality and moving to new "quality by design" models to get the product right the first time. The solution also offers optimized measures for process quality and reliability.

The production and release of pharmaceutical products are complex and lengthy processes. To meet these challenges, one of Atos and Siemens' global pharmaceutical partners has decided to test a new innovative solution, built and developed through a joint investment and business collaboration from the Atos-Siemens strategic global alliance. The "Process Digital Twin" is a complete virtual replica of a specific step in the manufacturing process, connected with IoT sensors installed on the actual plant.

It generates volumes of complex data and gives an instant view of all details of the operations. By pairing virtual and physical representations of the process, and using predictive models and real-time analytics, Atos and Siemens are helping the pharmaceutical industry to reinvent key elements of the manufacturing environment.

 "We are delighted to bring digital technologies to the heart of the global pharmaceutical industry, helping it meet the multiple health challenges of today and tomorrow." says Paul Albada Jelgersma, SVP, Global Head of Codex services for IoT & Siemens MindSphere at Atos. "With the Process Digital Twin developed by Atos and Siemens, a solid digital footprint of pharmaceutical products is created throughout the process development cycle, starting from the design phase, all the way to production."

"Digitalization at every point along the value chain will likely help the pharma industry get pharmaceuticals from the lab to the patient more swiftly." says Rebecca Vangenechten, Head of business Pharmaceutical Industry at Siemens. "This was a challenging journey where the partners created the basis for future process development & manufacturing, based on science, technology and innovation".

Atos provides its expertise in IT infrastructure, consulting, integration and data science, notably from its Codex expertise in AI and IoT solutions and services – while Siemens provides its Digital Enterprise expertise in OT systems for Pharma, notably with Simatic Sipat for real-time quality monitoring and StarCCM+ & HEEDS for process modeling & simulation.

The nature of Atos and Siemens' pre-integrated Digital Twin solution allows it to be deployed to production processes of any scale or complexity. By adjusting the technological building blocks Atos and Siemens can replicate Digital Twin use case to every new client – within pharmaceutical, chemical, process manufacturing industries and other markets – more efficiently.

Read our expert blogpost on how to accelerate the vaccine discovery process with a Digital Twin solution: https://atos.net/en/blog/the-role-of-digital-twins-in-producing-a-covid-19-vaccine

Visit the dedicated webpage on atos.net:

https://atos.net/en/solutions/atos-codex-connected-intelligence/smart-pharma

Autodesk Construction Cloud Adds Assets Module, Allowing Teams to Track Project Assets Through Entire Building Lifecycle

20 May 2020

Autodesk, Inc. announced the early release of the BIM 360 Assets module within Autodesk Construction Cloud. The BIM 360 Assets module enables construction teams to track and manage project assets through the entire building lifecycle – from design through handover – from one centralized location. The new module also gives construction teams increased access to asset data in the field, allowing them to perform commissioning and resolve defects on-site, decreasing the time to operations and ultimately reducing risk. The new BIM 360 Asset module will be included as part of BIM 360 Build subscriptions and generally available starting in mid-June.

BIM 360 Assets can easily track all construction assets such as materials (concrete, wood, drywall), components and equipment (air handling units, pumps, chillers, elevators), moveable equipment (forklift, excavator, concrete buckets) and rooms or areas.

"With the BIM 360 Assets module, we'll be able to deliver a complete and fully linked archive of all construction assets, streamlining the handover process from construction to operations," said Simon Terroitin, BIM coordinator at EBC, Inc. "BIM 360 Assets will allow us to better collaborate with our clients during site construction and give them exactly what they need right after construction completes. We see this having a significant impact on building client relationships and winning future business."

"The world in which we live today underscores the importance of resiliency, including project and data continuity," said Sameer Merchant, head of research and development for Autodesk Construction Solutions and associate vice president at Autodesk. "For project owners and contractors, this means spreadsheet-based asset tracking must evolve into a single source of truth for all assets, accessible by all teams at any time. BIM 360 Assets will improve both day-to-day workflow and handover, and subsequently become a part of any successful company's future resiliency program. This is yet another way Autodesk Construction Cloud is helping construction teams efficiently manage the entire building lifecycle with data flowing from design through to operations."

BIM 360 Assets connects asset data management for contractors and owners
Traditionally, assets have been tracked using multiple spreadsheets or paper-based tools, a disorganized and time-consuming process particularly when an asset needs to be accounted for throughout the lifecycle of a project. When asset data is disconnected from the project and in siloes, asset tracking – such as determining the installation status of an HVAC unit, pinpointing the location of an excavator or scheduling interior finishes that require a long lead time – can be inefficient. This lack of connectivity can lead to scheduling delays, cost overruns, and potential liability if assets are installed incorrectly –

not to mention poor client satisfaction when the owner is obliged to assume responsibility during facility management set-up.

BIM 360 Assets provides a user-friendly and centralized location to track all construction assets from planning through to operations.

Key features of BIM 360 Assets include:

Centralized documentation – Quickly access all asset information including product information such as cut-sheets, certifications, training materials and warranty documents through a centralized repository.

Connect asset data from quantity take-off – Easily extract asset data directly from the model and import into BIM 360, allowing the office team to track assets in the field and with a bi-directional connection, see progress visualizations in Assemble.

Integrated field management workflows – Connect assets and commissioning efforts to other field management workflows like documenting defects using Issues and completing inspections with Checklists – all from a mobile device.

Barcode / QR code scanner – Carry out relevant inspections and ongoing maintenance effortlessly with the simple scan of a barcode or QR code from your mobile device.

Importing and customization – Quickly populate an asset list from spreadsheets and then easily track when an asset has been specified all the way through acceptance using custom categories, statuses and attributes.

For contractors, BIM 360 Assets offers the ability to align project assets to the model, ensuring all teams have up-to-date information, and also provides a digital trail of what issues have been resolved during installation. These new capabilities also help minimize future risk and litigation by tying a historical record to each asset. For owners, data handover saves significant time and provides an in-depth understanding of changes made to the building as far back as during the design process. For example, an owner will be able to scan a piece of equipment, get a historical record of when it was installed and by whom, have immediate access to documentation and know when maintenance needs to be scheduled.

"At PARIC, we are focused on finding the best enterprise solutions and solving for hundreds of projects rather a single one," said Andy Leek, vice president of technology & innovation at PARIC. "The new BIM 360 Assets module provides a cleaner way to manage equipment sets and other facility components across the entire company. We'll be able to simplify project set-ups and in turn, decrease miscommunication to eliminate rework and reduce risk at handover."

To learn more about the BIM 360 Assets module, visit the Autodesk Construction Cloud Assets webpage. Existing customers who are interested in taking advantage of early access to the BIM 360 Assets module can reach out directly to their customer success manager or sales representative. The new Assets module will be added to all BIM 360 Build account subscriptions when it is commercially available in mid-June, 2020.

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BETA CAE Systems launches NEERE, the new remote work & collaboration platform
19 May 2020

The incorporation of remote communication and collaboration solutions in fast-paced environments, where global businesses seek effective ways to streamline product development processes, had already reached its limits. Today's unprecedented circumstances push these limits further as organizations

struggle to ensure business continuity through work-from-home. The deployment of an effective and productive professional remote work and collaboration environment became a necessity.

Team members, of varying levels of office distance and specialization, need an efficient medium through which they can communicate, put down plans, or discuss problem solutions and counter measures. Especially in the field of engineering simulation the evolution of analysis models and the evaluation of results, on different design stages and centers, was not until now as time-efficient and effective as required. At the same time, working or communicating from distance, with non-reliable and not-secure platforms, was adding risk and reservations.

BETA CAE Systems brings forth NEERE, a new software, with the aim to meet existing needs and take remote work and collaboration to new levels. Our purpose is to offer to the Industry the capability to mobilize and make available data and information stored in corporate systems, but also to allow knowledge and experience sharing, in a manner that ensures confidentiality. At the same time, we are committed in offering new tools and practices that expand the capabilities and effectiveness of collaboration procedures.

NEERE is an on-premises, web-based tele-collaboration environment, tailor-made for the engineering community. It enables remote work and teamwork, and boosts productivity through the direct engagement of users from all over the globe, in a secure, enterprise-ready, multi-OS web-platform. This environment offers a complete toolset to share and control desktop workstations via web-browser, control access, run software, communicate through messages, voice, live videos, and jointly experience virtual environments. Integrated with ANSA, META, and META VR, NEERE provides a complete collaboration platform that makes sharing of knowledge and exchange of ideas effortless. Teams with interdisciplinary members can now work together in real-time technical meetings, fostering innovation and reducing virtual product development cycles.

"NEERE comes right on time. Exploiting our long experience on how our global customers and partners work to achieve their goals and listening to their requirements and bottlenecks, we created and continue to improve a tool that ensures the efficiency and value creation of their teams in a trustworthy manner" says Sam Saltiel, CCO of BETA CAE Systems. "It's remarkable that a large number of our esteemed customers adopted and deployed NEERE while it was still in its earlier pre-release stages".

NEERE is available worldwide by BETA CAE Systems and its business partners.

Bluestar PLM integrates engineering data inside Dynamics 365 / AX
18 May 2020

Start integrating your product data into D365/AX with Bluestar's CAD-ERP connectors, which allow you to transfer all your Engineering data directly into the ERP. This connection provides a seamless flow of data that automatically synchronizes information between CAD and ERP.

To achieve complete integration between Engineering and Manufacturing, full traceability of the product-related processes is required, which makes Bluestar PLM inside Dynamics 365/AX the next step for your growing manufacturing. Bluestar's ERP-based PLM is tailored to your business needs. This is achieved with a portfolio of modules that can be combined into a single PLM solution.

Our PLM is a single and complete solution that connects the entire enterprise and end-to-end business processes, from early product development all the way to product fabrication and service.

Bluestar PLM is embedded in Microsoft Dynamics 365 for Finance and Operation and AX. It provides a

seamless exchange of information between CAD, PLM, and ERP. With Bluestar PLM, the entire enterprise becomes more collaborative, efficient, and faster by bridging the gap between Engineering and Manufacturing.

On top of the Bluestar PLM, you can add a wide range of modules, that ads to the basic PLM experience, for even more functionality and transparency connected to your product-related processes.

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Cadence Delivers 10 New Verification IP Targeting Automotive, Hyperscale Data Center and Mobile Applications

20 May 2020

Cadence Design Systems, Inc. announced the availability of 10 new Verification IP (VIP) solutions that allow engineers to quickly and effectively verify their designs to meet the specifications for the latest standards protocols. The expansion of the Cadence® VIP portfolio supports customers developing SoCs and microcontrollers for automotive, hyperscale data center and mobile applications, including with CXL, HBM3, TileLink and MIPI® CSI-2sm 3.0.

The Cadence VIP are part of the Cadence Verification Suite and support the company's Intelligent System Design™ strategy. The Cadence Verification Suite is comprised of core engines and verification fabric technologies that increase verification throughput and design quality, fulfilling verification requirements for a wide variety of applications and vertical segments. For more information about Cadence VIP solutions for automotive, hyperscale data center and mobile applications, please visit www.cadence.com/go/NewVIP.

"Our team has been using Cadence's VIP for CSI-2 and UFS, which helped us to deliver industry-leading solutions for automotive, industrial and IoT applications," said Toshinori Inoshita, Director, Design Methodology Department, Shared R&D EDA Division at Renesas Electronics Corporation. "Cadence continuously provides VIP offerings that meet the industry's latest standards. We plan to continue our collaboration with Cadence to advance the development of our next-generation products."

The new Cadence VIP offer customers a comprehensive verification solution for the most complex protocols. Customers have access to a consistent API across all VIP with complete bus functional models (BFMs), integrated protocol checks and coverage models, ensuring they can rapidly adopt the appropriate VIP needed for their design. The new VIP solutions support multiple application areas and specifications, including:

Hyperscale data center:

CXL – Compute Express Link™

HBM3

Ethernet 802.3ck

Automotive:

CSI-2 3.0

MIPI I3C® 1.1

Consumer and mobile:

TileLink

eUSB2

UFS 3.1

MIPI SPMIsm

MIPI RFFEsm v3.0

Additionally, all Cadence VIP include Cadence TripleCheck™ technology, which provides users with a specification-compliant verification plan that is linked to comprehensive coverage models and a test suite to ensure compliance with the interface specification.

"The requirements for higher bandwidth, lower power and more effective cache coherency management are growing exponentially, driving a new set of protocols to address them," said Paul Cunningham, corporate vice president and general manager of the System & Verification Group at Cadence. "With these 10 new VIP, Cadence is providing customers with smart verification solutions that ensure the designs comply with the standard specifications as well as application-specific timing, power and performance metrics, enabling increased verification throughput and the fastest path to IP, SoC and microcontroller verification closure."

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Designing plants or factories of any size for high performance

20 May 2020

Worldwide, the M4 PLANT software that was developed in Germany is appreciated for its performance. The professional factory layout and plant design software enables size-independent planning and also offers a high level of functionality. This makes the design of any factory or plant easier and projects are more fun.

Anyone designing large factories and plants depend on software that can handle even very large and extensive models with high performance. But many 3D designing tools are unable to display very large models with numerous details, let alone design them. Here is the advantage of M4 PLANT, because the architecture of the software, is specifically created to design large plants, and finally make size-independent designing in project work a reality.

With the recently released version 7.0 of M4 PLANT, the software supports the factory designer more than ever in his daily layout tasks. The complete integration between the 2D and 3D world allows the creation of layouts in a familiar and intuitive way. At the same time, the software offers versatile and adaptable catalogues from which to draw. For example, conveyors or racking systems can be selected and designed very quickly. Even your own machines can be imported directly using the 3D interfaces or simply modelled in the software itself.

M4 PLANT offers a comprehensive range of functions for plant design. With modules for process engineering (P&ID), 3D pipeline construction, the creation of pipeline isometrics or steel construction, the software supports all areas relevant to plant design. Here too, the software offers an enormous range of catalogue components. And with version 7.0 of M4 PLANT, these have been expanded even further, especially in the area of pipeline construction. And here, too, customers can generate their own individually tailored catalogues.

The software can be downloaded free of charge from CAD Schroer's website and tested for 30 days. The manufacturer offers extensive video tutorials, as well as 1-to-1 testing support for businesses. So if you want to see the performance of the software for yourself, simply download the software and try it with your own design data. And if you are stuck at any point, simply contact CAD Schroer: "With M4 PLANT, we have succeeded in developing extremely high-performance software. We look forward to

making the new version available to today's modern designer

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Hexagon - Faster WORKNC Delivers on Performance

19 May 2020

Improved Productivity Through Faster Toolpaths and a Simpler User Experience

"On average, twice as fast. For some projects, four times faster." Those figures have been recorded for the enhanced Parallel Finishing toolpath in WORKNC 2021, which lets manufacturers use high speed cutters of any shape…especially circle segment tools such as barrel, lens and oval cutters.

WORKNC International Technical Manager Jean-Louis Humbert says: "This strategy is now on average twice as fast as the previous equivalents, Planar Finishing and Z-Level finishing. In certain projects, the calculation time difference was four times faster."

Another important feature in the latest release of the software is the New Part centering / probing function, which generates pointset nodes for any inspection machine or direct CNC part inspection on a milling machine. And a new Probe Inspect command creates and exports control points in the CAM project to feed a probing system. There are also specific improvements to part centering, tailored for CNC machines with table palletization.

The latest release builds on the popular fully automatic 5-axis curve creation, by splitting the steps when more complex curves are required. It also enhances the synchronisation capabilities between each curve's bottom and top limits.

Improvements to corner finishing with 5-Axis Rolling include being able to improve surface quality by using a cutting tool's larger circle segment. "This 5-axis strategy can now change the contact point on the tool, ensuring optimal corner finishing with the tip of an oval tool," says Jean-Louis Humbert.

A new strategy – 5-Axis ISO Guiding – not only guides the toolpath by curves, but also by an underlying drive surface. It supports profiled cutters with advanced toolform technology; and new 5-axis blade finishing functionality allows profile cutter management, based on new algorithms.

New items of functionality in WORKNC Designer – the specialist CAD for CAM 3D modelling module – include eight dedicated advanced analysis functions for interrogating, analysing and validating CAD models: Compare, Draft Analysis, Edge Analysis, Altitude Analysis, Curvature Analysis, Face area Analysis, Thickness and Face type.

WORKNC Designer's Reverse Engineering module allows imported scan data, either from files or directly by connecting to Hexagon scanners, to be converted into a refined mesh. The mesh data can then be used as it is, or as a reference for curve and surface creation, enabling mesh models to be fully reverse engineered to complete CAD or convergent models.

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iBASEt Improves Manufacturing Intelligence Application

21 May 2020

iBASEt announced the general availability of an improved Manufacturing Intelligence application. iBASEt customers upgrading to this enhanced product can increase process efficiency, drive intelligent decision support, and achieve higher quality standards.

In today's digital environments where data is collected at an accelerating pace, manufacturers are

challenged with how to best analyze and act upon this wealth of knowledge. As part of iBASEt's continued focus on simplifying the complex, the company's Manufacturing Intelligence application now provides a faster comparison of real-time and historical activity to unlock future performance gains.

As a value-added application in iBASEt's Digital Operations Suite, Manufacturing Intelligence provides out-of-the-box analytical capabilities with comprehensive reporting, a data warehouse, Extract, Transfer and Load (ETL) scripts, and pre-configured dashboards for manufacturers using iBASEt's Solumina. Manufacturing Intelligence now provides greater contextual visibility into operations processes to help drive decisions and streamline production, quality, and MRO workflows, improving overall efficiency and quality performance.

"We continue to invest in adding functionality across our product suite. Manufacturing Intelligence now provides more value to our customers with real-time, contextual measurement capabilities and more useful dashboards, ideal for frontline workers, supervisors, and managers," said John Fishell, Vice President, Product Development at iBASEt. "Manufacturing Intelligence is an ideal complement for customers leveraging the iBASEt Digital Operations Suite and can be provided at a fraction of the cost of an internally built solution."

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Lantek Intelligent Collision Avoidance algorithm helps prevent fiber laser head damage

20 May 2020

Lantek has introduced the Intelligent Collision Avoidance (ICA) algorithm to help minimize potential collisions between a fiber laser cutting head and the contours of the sheet metal during the cutting process.

The algorithm is able to detect which components and scrap elements of the sheet metal might bounce and position themselves on top of nearby contours or become rotated, which would pose a risk to the movements of the cutting head. When it detects these components and elements, the system automatically assigns one or more microcuts. As the cutting of the sheet metal advances, the system can define a safe cutting path, allowing the user to choose to cut parts as soon as possible or at the end of the sheet metal machining. Also, if this last finishing process for minicuts comes into conflict with potentially unstable contours, the system moves automatically to an area without conflict.

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Siemens expands ODB data exchange format; adds electronics manufacturing information flow to comprehensive digital twin

20 May 2020

Siemens announced the expansion of its industry-leading ODB++™ language intelligent, single data-structure for transferring PCB designs into fabrication, assembly and test with a unified electronics manufacturing solution of open data formats for the entire digital thread. With over 50,000 worldwide ODB++ users, rebranded as ODB++-Design, ODB++Process, ODB++Manufacturing and grouped under the ODB++ umbrella, Siemens' newest data exchange format, ODB++Process (previously known as OPM), helps enable the open exchange of process engineering information between disparate machines, software vendors, and stand-alone processes, helping accelerate new product introductions (NPIs) and first-time-right manufacturing. This is unique to the industry as no other standards body or solution provider offers a data exchange format for this capability.

This free and proven data exchange solution helps users to easily transfer machine programs from one machine type to another, such as a target machine from a different vendor or a machine on a different platform. ODB++Process format provides the open exchange of process engineering information which then converts the data for immediate use on any production machine or workstation.

"By using a single assembly format file output like ODB++Process, which standardizes machine package library's with vShapes across the entire production line, Koh Young is able to minimize program variations between machines like inspection and mounters," said Mr. JD Shin, Chief Sales Office for Koh Young Technology. "The enhanced approach to programming reduces human error and variation and significantly reduces the NPI programming cycle time. What's more, the single file assembly format output like ODB++Process is machine agnostic and easily enables moving production assembly data and process requirements between lines – and more importantly factories across the world."

Thus, with ODB++Design supporting full product design data representation, and ODB++Manufacturing (previously known as OML) neutralizing machines' shop floor data, the ODB++Process now completes the open design-through-manufacturing digital thread for electronics. Each of these intelligent data exchange modules is designed to be neutral and open, supporting all SMT machine vendors (placement, inspection, test and soldering) and all EDA software providers. With a complete digital twin of the electronics manufacturing flow (product, process, and performance), customers can realize their latest Smart Factory or Industry 4.0 initiatives with confidence and efficiency.

These data exchange format solutions deliver the complete digital twin of the electronics manufacturing information flow:

ODB++Design: Full product design data representation, created by design tools, used for design for manufacturing, fabrication, test and assembly analysis (DFx), as well as being the single carrier of design data to electronics assembly and fabrication.

ODB++Process: The format into which the design data is prepared and converted ready for use at any production machine or workstation.

ODB++Manufacturing: The specification for all shop-floor events, bi-directionally between machines, and between machines and Smart Industry 4.0 software solutions.

"Siemens is an active member of the IPC and we will continue to invest in our own data exchange formats to ensure that quality and resources are available to the global community," stated Dan Hoz, general manager, Valor Division of Siemens Digital Industries Software. "Our focus on multi-domain digitalization solutions will continue to be a critical advantage to our customers so they can manufacture innovative products with minimal risk and faster time to profit."

The ODB++ family of formats are supported by an active community, via an open, inclusive partnering program, free of charge and without membership fees. To access these formats, visit www.odbplusplus.com.

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Stratasys - MakerBot Launches METHOD Carbon Fiber

19 May 2020

MakerBot, a subsidiary of Stratasys moves into the next level of 3D printing with the launch of the METHOD Carbon Fiber Editions. The new METHOD Carbon Fiber Editions are designed to enable

engineers to print stronger and more accurate parts for manufacturing tools, jigs and fixtures, and end-use production, and can be used to print metal replacement parts in some applications.

The latest additions to the METHOD platform, the METHOD Carbon Fiber Editions print carbon fiber reinforced nylon that is optimized for high strength and heat resistance. The new METHOD and METHOD X Carbon Fiber Editions come pre-configured with a new composite extruder that is optimized to handle abrasive materials. The new extruder, which is also available as an upgrade for the METHOD and METHOD X 3D printers, has hardened metal drive gears, a metal filament switch, and an interchangeable hardened steel nozzle. It can print MakerBot Nylon Carbon Fiber material and all other model materials supported on the METHOD platform.

The new MakerBot Nylon Carbon Fiber material is an ideal lightweight alternative to metal for structural applications such as vehicular brackets and inspection gauges, manufacturing tools such as robotic end effectors, and under-hood applications. Due to its strong thermal and mechanical properties, carbon fiber is frequently used in manufacturing, automotive, and aerospace industries. Used as an alternative to metal parts, carbon fiber can help reduce costs and increase overall efficiencies for companies.

"Nylon carbon fiber is one of the most in-demand and exciting classes of materials. Its high strength, heat resistance, and stiffness properties make it ideal for printing metal replacement parts, helping reduce costs and increase overall efficiency for companies," said Nadav Goshen, President and CEO, MakerBot. "With the launch of METHOD Carbon Fiber, we are making composite 3D printing more accessible to more users than ever before and opening the door to new applications. METHOD Carbon Fiber is the latest addition to the rapidly growing METHOD 3D printing platform."

METHOD's heated chamber produces strong manufacturing-grade nylon carbon fiber parts with superior surface finish. Users can print complex geometries with internal cavities using MakerBot's PVA soluble support material and anneal the final part for extra strength with METHOD's new heated chamber annealing feature. With the METHOD X Carbon Fiber Edition, users can print complex geometries using Stratasys® SR-30™ soluble supports for an even better surface finish. Breakaway supports are also available for faster print results. METHOD's dry-sealed filament bays help to keep the moisture-sensitive nylon carbon fiber material dry, resulting in better print quality and reliability.

MakerBot plans to offer additional composite materials available for the METHOD Carbon Fiber Editions and the composite extruder for METHOD in the future. Since the METHOD X has a higher chamber temperature than METHOD of up to 110°C on the build plane, it will be able to support a wider range of high-performance composite materials in the future. The METHOD Carbon Fiber Editions, MakerBot Nylon Carbon Fiber material, and the composite extruder are expected to begin shipping in June 2020.

The METHOD platform features industrial 3D printing capabilities that make it ideal for printing with advanced, engineering-grade materials. The combination of a heated chamber, ultra-rigid steel frame, sealed material bays, performance extruders, and dissolvable supports enable engineers to print consistently accurate parts. METHOD offers a diverse portfolio of materials for a variety of engineering applications. MakerBot materials include Nylon Carbon Fiber, PC-ABS, PC-ABS FR, ABS, ASA, Nylon, PETG, Tough, PLA, and support materials SR-30 and PVA. Additionally, with the availability of the MakerBot LABS extruder for METHOD, users can print with more industrial materials from leading material suppliers.

For more information, visit www.makerbot.com/carbon.

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Synopsys and TSMC Collaborate to Enable Designs of HPC, Mobile, 5G, and AI SoCs with Certified Solutions

18 May 2020

Synopsys, Inc announced certification of its digital and custom design platforms for TSMC's N6 and N5 process technologies. Synopsys' long-term collaboration with TSMC has resulted in accelerating next-generation product design for key vertical markets, including high-performance computing (HPC), mobile, 5G, and AI chip designs.

This achievement is the result of an extensive, multi-year collaboration to deliver optimized design solutions that accelerate the path to next-generation designs with innovations providing improvements in power savings and design performance. Synopsys' collaboration with TSMC also extends to 3DIC process technologies, which include CoWoS®, InFO, and TSMC-SoIC™ that enable scalable integration for achieving greater functionality and enhanced system performance.

"TSMC works closely with ecosystem partners to ensure that semiconductor designers can meet next-generation requirements for performance and low power in high-growth markets using TSMC's latest process technologies," said Suk Lee, senior director of the Design Infrastructure Management Division at TSMC. "We look forward to continuing our joint efforts with Synopsys to help our mutual customers unleash their silicon innovations for high-performance computing, mobile, 5G, and AI applications."

Certified innovations in multiple Synopsys design tools for HPC and mobile design flows enable designers to take full advantage of TSMC's N6 and N5 process technologies that enhance density, operating frequency, and power consumption. Tools also have been improved to support ultra-low VDD requirements for low power consumption mobile and 5G designs. As part of the design flow platform certification, results from Synopsys StarRC™ and PrimeTime® signoff solutions were rigorously compared to implementation results. PrimeTime® timing reports were also well compared to the golden HSPICE results, to successfully achieve design flow correlation targets that will improve design convergence and shorten overall time-to-market.

"Synopsys' expertise in delivering integrated flows from front-end, physical implementation and signoff combined with TSMC's leadership in process technology, drives the next generation of design innovations in fast-growing markets such as 5G, AI and HPC," said Charles Matar, senior vice president of System Solutions and Ecosystem Enablement for the Design Group at Synopsys. "With the TSMC-certified Synopsys design tools, we can provide our customers with a platform that can take full advantage of TSMC's advanced technologies with improved performance, power and scaling."

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VMware Introduces Second Generation of VMware Cloud on Dell EMC to Support Infrastructure Modernization and Business Continuity Initiatives

21 May 2020

VMware, Inc. announced the availability of the second generation of VMware Cloud on Dell EMC , a cloud service that combines the simplicity and agility of the public cloud with the security and control of enterprise-grade on-premises infrastructure. Jointly developed with Dell Technologies ,
this VMware service delivers simple, more secure and scalable infrastructure as-a-service to customers' on-premises data center and edge locations.

"Today's IT teams are under constant pressure to deliver the advantages of a cloud operating model—

namely, speed and agility—while still accounting for key security and compliance assurances," said Fidelma Russo , senior vice president and general manager, VMware Cloud on Dell EMC. "VMware Cloud on Dell EMC further enables IT teams to transform the operation, management and protection of their on-premises infrastructure to a cloud model. Organizations can migrate existing VMware -based workloads immediately to this cloud service, eliminating any re-development, re-factoring, or architectural rework and related costs. Additionally, it maximizes the value from existing IT investments—eliminating the potential need for point IT tools and related processes."

Cloud Service Unveils VDI Support, Large-Scale Deployment and Data Protection Capabilities

VMware Cloud on Dell EMC and features high-performance compute, storage and networking capabilities powered by VMware vSphere , VMware vSAN and VMware NSX running on Dell EMC VxRail, the leader in Dell Technologies #1 hyperconverged systems. The service is designed to help IT organizations reduce operational complexity and accelerate innovation. VMware Cloud on Dell EMC supports a hybrid cloud model for IT enabling them to deliver infrastructure as-a-service to data center and edge locations with consistent infrastructure and operations. This cloud service provides administrators with management of and visibility into all on-premises systems and is powered by VMware Cloud Foundation .

The second generation of VMware Cloud on Dell EMC introduces several new key capabilities:

Business Continuity Support via VDI : In today's environment, virtual desktops are a critical capability for enabling business continuity as more people work from home. VMware Horizon enables enterprises to offer their remote workforces more secure access to their desktops and applications—especially valuable in highly regulated industries such as healthcare and financial services. VMware Cloud on Dell EMC is now fully certified for VMware Horizon to deliver virtual desktops at the edge or in the data center.

Enterprise-Grade Deployment Options: With a brand new, full enterprise-grade rack type for data center and colocation deployment, VMware Cloud on Dell EMC has doubled capabilities for compute, storage and networking in support of traditional and modern applications. This new, powerful 42RU R2 rack is now available in addition to the previously available R1 rack. Additionally, the cloud service now features automatic capacity expansion to ease scalability through the addition of new nodes over time.

Data Protection and Operational Transparency: VMware Cloud on Dell EMC now offers support for backup and recovery with certification of Dell EMC PowerProtect Data Manager to protect customers' workloads. Additionally, the service supports other leading backup and recovery solutions. To enable greater operational transparency, insights and compliance, the service also introduced complete support for VMware vRealize Log Insight including integration with existing log solutions.

VMware Cloud on Dell EMC harnesses the full power of the VMware Software Defined Data Center , one of the most proven, most widely deployed cloud infrastructures supporting some of the most demanding business critical applications across global data centers. VMware Cloud on Dell EMC pioneers a new model for IT that delivers VMware's SDDC stack on-premises as-a-service and is operated and updated by VMware end-to-end. VMware Cloud on Dell EMC is core to the Dell Technologies Cloud data center-as-a-service solution.

 "Where we work and where we live are changing more rapidly than ever before. The ability to deliver innovative new capabilities and enhance business level continuity in any location depends upon the use

of Local Cloud as a Services and VDI solutions that transform infrastructure into easy to deploy and operate resources. With its second generation VMC on Dell EMC offering, VMware is providing the kind of consistent, secure, and centrally managed platform that enterprises need to respond to rapidly evolving needs." – Richard Villars , Group Vice President, Worldwide Research at International Data Corporation

"Our customers expect flexibility and consistency in their use of cloud technologies from the core to the edge. They expect cloud to be a seamless enabler across these environments. With the second generation of VMware Cloud on Dell EMC, we are extending this cloud service capability to a broader set of enterprise use cases. With the tight integration between Dell EMC VxRail and VMware , we are enabling our customers with even greater performance, delivered as a service, across edge locations, the data center and public clouds." – Deepak Patil , senior vice president and general manager, Cloud Platforms & Solutions, Dell Technologies

"We have worked closely with VMware since early days of VMware Cloud on Dell EMC becoming available as a cloud service. WWT has seen tremendous interest and demand for this innovative solution and we are working side-by-side with VMware to enable our mutual customers on the service. The latest announcement of the next-generation of VMware Cloud on Dell EMC expansion brings this solution to the next level with extended scale and incorporation of leading back-up solutions from Dell EMC PowerProtect Data Manager—making this a great choice for our customers." – Bob Olwig , vice president of Business Development and Marketing, World Wide Technology

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