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Acquisitions

Bentley Systems Acquires 3D Geospatial Company Cesium

6 September 2024

Bentley Systems, Incorporated, the infrastructure engineering software company, announced it has acquired 3D geospatial company Cesium. Cesium is recognized as the foundational open platform for creating powerful 3D geospatial applications, and its 3D Tiles open standard has been widely adopted by leading enterprises, governments, and tens of thousands of application developers globally. Cesium ion, the company's SaaS platform, brings 3D geospatial experiences to more than 1 million active devices every month, while Cesium's open-source offerings have more than 10 million downloads.

Bentley's iTwin Platform powers digital twin solutions that are used by engineering and construction firms and owner-operators to design, build, and operate the world's infrastructure. The combination of Cesium plus iTwin enables developers to seamlessly align 3D geospatial data with engineering, subsurface, IoT, reality, and enterprise data to create digital twins with astonishing user experiences that scale from vast infrastructure networks to the millimeter-accurate details of individual assets—viewed from land, sky, and sea, from outer space to deep below the Earth's surface.

Bentley CEO Nicholas Cumins said, "A 3D geospatial view is the most intuitive way for owner-operators and engineering services providers to search for, query, and visualize information about infrastructure networks and assets. With the combined capabilities of Cesium and iTwin, infrastructure professionals can make better informed decisions in full 3D geospatial context—all within a single, highly performant environment."

Patrick Cozzi, CEO of Cesium, continued, "Joining Bentley marks an important milestone for Cesium as we continue our journey to create the best developer platform for the built and natural environment—founded on open standards and open-source technologies. The combined power of our two organizations and our shared commitment to openness will provide new opportunities for growth and create greater value for an already flourishing developer ecosystem that ranges from small start-ups to global enterprises."

An example is Komatsu, the largest construction equipment manufacturer in Japan, and the second largest in the world, which uses Cesium's 3D geospatial technology to monitor construction sites globally, track changes over time, compare architectural plans with real-world data, and run precise and near real-time measurements. With Cesium integrated into Bentley, Komatsu gains expanded access to world-leading digital twin technology.

Chikashi Shike, executive officer, Smart Construction Promotion Division, Komatsu Ltd., commented, "Komatsu and Cesium brought novel thinking to the construction industry by leveraging advanced visualizations to deliver more precise insights and enable our customers to make better, more informed construction decisions. With Cesium as part of Bentley, we can further enrich our Smart Construction digital twins with engineering models, subsurface data, and more, for safer and more efficient construction projects."

In addition to the widespread adoption of its platform, Cesium is also a leader in promoting open standards, such as 3D Tiles for visualizing massive 3D geospatial data, which was adopted as a community standard by the Open Geospatial Consortium (OGC) in 2019.

Peter Rabley, CEO of OGC, said, “As infrastructure sectors become more data-centric, the importance of an open ecosystem will only increase. As the leading voice for open standards and interoperability in the geospatial community, OGC welcomes the ongoing commitment of Bentley and Cesium to solve global challenges through open, interoperable platforms.”

With the acquisition, Cozzi was named Bentley’s chief platform officer, leading the development of the combined Cesium and iTwin platform offerings, reporting to Bentley’s CTO Julien Moutte.

The financial details of the transaction were not disclosed. Dechert LLP acted as legal advisor to Bentley in the transaction.

K1 Acquires MariaDB, a Leading Database Software Company, and Appoints New CEO

10 September 2024

K1 Investment Management, LLC (“K1”), one of the largest investors in small-cap enterprise software companies, announced the completion of its tender offer to acquire 100 percent of the issued ordinary shares of MariaDB plc (“MariaDB”), a leader in enterprise database solutions. This strategic investment positions MariaDB to further expand its presence in the enterprise market and continue delivering innovative, scalable solutions globally.

MariaDB, headquartered in Silicon Valley and Dublin, Ireland, serves nearly 700 active customers across industries including banking, telecommunications, government, healthcare and e-commerce. Notable clients include Deutsche Bank, Nokia, RedHat, Samsung and ServiceNow, alongside major public sector entities including the U.S. Department of Defense, and across multiple Intelligence and Federal Civilian agencies. Known for its innovation, scalability and dependability, MariaDB database products power mission-critical applications through its transactional, analytical and mixed workloads.

“To run our strategic risk platform at Deutsche Bank, we needed a database that was reliable and performant while handling a massive amount of data. That’s why we turned to MariaDB,” said Liang Ma, Director Core Strats at Deutsche Bank. “With MariaDB Enterprise Server, we have a database that delivers the stability we need at a fraction of the cost of proprietary alternatives.”

MariaDB also announced the appointment of Rohit de Souza as CEO. Rohit brings considerable leadership experience from his roles at Actian and Micro Focus, where he led global organizations driving growth and transformation. Paul O’Brien, former CEO of MariaDB, will remain involved with the company as an advisor.

“We are thrilled to welcome MariaDB to the K1 portfolio and to have Rohit leading the company into its next phase of growth,” said Sujit Banerjee, Managing Director of K1 Operations, LLC. “Together, we aim to accelerate product innovation and continue MariaDB’s

mission of delivering high-quality, enterprise-grade solutions to meet the growing demands of the market.”

MariaDB continues to innovate with upcoming product releases, including the launch of vector search in MariaDB Server and a Kubernetes (K8s) Operator, catering to AI and cloud-native trends. These advancements enable enterprises to build AI-driven applications and deploy scalable solutions, including advanced recommendations, image-based search and intuitive chat bots that leverage large language models (LLMs) and data analysis tools, all while seeking to ensure data reliability at enterprise scale.

“With K1’s support, we are poised to expand our capabilities and continue delivering the innovative database solutions our customers rely on,” said Rohit de Souza, CEO at MariaDB.

“This partnership allows us to further product innovation, advancing our ability to support new workloads driven by AI and the cloud. We remain focused on making it easier for customers to transition from costly alternatives and meet the rapidly growing demands for AI and cloud-based solutions.”

“As we look to the future, with new leadership and the partnership of K1, I have never been more confident in the future of MariaDB. It has been my pleasure to serve MariaDB as CEO and I look forward to supporting Rohit as he transitions into the business,” said Paul O’Brien, former CEO of MariaDB.

MariaDB is the latest transaction announced by K1, following the strategic growth investment in Board Intelligence and the sale of GoCanvas to Nemetschek Group (FRA:NEM). This marks K1’s third take-private transaction following Elmo (ASX: ELO), a leading provider of cloud-based human capital management solutions, and Attraqt (LON: ATQT), a pioneer in AI-driven search and merchandising solutions for online retailers.

Lazard Frères & Co. LLC. served as financial advisor to K1. Kirkland & Ellis LLP, and A&L Goodbody LLP served as legal advisors to K1. Baker Botts LLP and Matheson LLP served as legal advisors to MariaDB.

Siemens agrees to acquire Trayer Engineering Corporation to broaden product portfolio for grid modernization

10 September 2024

Siemens has announced its agreement to acquire California-based Trayer Engineering Corporation (Trayer), a leader in the design and manufacturing of medium voltage secondary distribution switchgear suitable for outdoor and below ground applications.

Trayer specializes in hermetically sealed padmount and submersible switchgear, resistant to extreme weather conditions. The company will provide complementary technologies to the Electrification and Automation Business Unit at Siemens, to further support the market trend of undergrounding overhead electrical networks, increasing resilience of the North American distribution grids. Siemens, as a leading player in the Electrification and Automation industry, will increase the availability of Trayer’s leading submersible and padmount switchgear portfolio by its widespread presence in the market.

“We see a significant growth opportunity in secondary power distribution, particularly in addressing the challenges posed by extreme weather conditions. By combining forces, we will provide an end-to-end portfolio to our customers by unlocking resources and competencies to serve this growing demand,” said Stephan May, CEO of Electrification and Automation at Siemens Smart Infrastructure. “Our digital offerings and Siemens Xcelerator portfolio, Electrification X, complements Trayer’s resilient solutions to enable utilities and municipalities to upgrade their distribution grids and drive grid efficiency for outdoor and below ground applications.”

Trayer has a long history in producing maintenance-free switchgear of the highest quality, designed to thrive in the most challenging circumstances. Its submersible distribution switchgear is perfectly suited for use in areas prone to flooding or extreme weather conditions, providing reliable electrical distribution while being protected from water and environmental damage. Whereas padmount switchgear is typically installed at ground level in residential, commercial, and industrial areas, offering easy access for safety inspections and operation while ensuring reliable, safe, and efficient electrical distribution for underground electrical grids.

“By joining a 175+ year old, established industry leader, Trayer sees accelerated growth, investment, and employee opportunities,” said John Trayer, CEO, Trayer. “All of the employees at Trayer look forward to growing together, as Trayer offers a truly comprehensive solution to utility and municipal customers to help them harden and expand their electrical infrastructure.”

Trayer was founded as a family business in 1962 and currently employs 130 people. It will continue to operate as a separate legal entity, under the banner “A Siemens Business”. The transaction is subject to regulatory approval, and closing is expected in calendar year 2024. Terms of the transaction are not disclosed.

CIMdata News

Aerospace & Defense PLM Action Group Announces the Release of an AD PAG Insight on Digital Engineering

12 September 2024

[The Aerospace & Defense PLM Action Group](#) (AD PAG) announces the publication of a new **AD PAG Insight** that presents the members’ position on digital engineering.

With the rise of digital twins, digital thread, and connected engineering systems, Product Lifecycle Management’s (PLM) fundamental capabilities are in greater demand. Interest is growing in PLM’s extended functions beyond product data management (PDM) and lifecycle state design. As Model-Based Systems Engineering (MBSE), the Internet of Things (IoT), and new technologies emerge, managing product data relationships becomes increasingly vital. The aerospace and defense industry is starting to refer to these expanded capabilities as digital engineering. Could this be the future of PLM?

In late 2023, executives from companies making up the Aerospace & Defense PLM Action Group membership chartered a team of thought leaders from member companies to develop a cohesive perspective on the vital connection between digital engineering and PLM. This AD PAG Insight represents the culmination of their collaborative effort, offering a groundbreaking vision for the future of engineering in the aerospace and defense industry and beyond.

Those interested in learning more may download this AD PAG Insight at <https://www.cimdata.com/en/aerospace-and-defense/publications/mbse>

About the Aerospace & Defense PLM Action Group

Since its founding in 2014, the AD PAG, administered by CIMdata, has sponsored research and jointly staffed projects on a diverse set of prioritized PLM-related industry and technology topics. These topics include Model-Based Definition, Multiple-View Bill of Materials, PLM Technology Obsolescence Management, Global Collaboration, Model-Based Systems Engineering, and Digital Twin/Digital Thread. As an outcome of these investments, the AD PAG has released a series of direction statements, research reports, position papers, and most recently, AD PAG Insights. All are freely available for downloading from its website at <http://www.ad-pag.com/>. Making these materials available is consistent with the Group's mission to engage proactively within the PLM ecosystem and advocate for common direction and positions within the aerospace and defense industry on PLM-related topics of importance to the members.

For more information about the AD PAG, please contact CIMdata at info@cimdata.com.

Building the Digital Thread—Is Your Data Quality up for the Challenge? – a CIMdata Commentary

10 September 2024

The Digital Thread, Data, and How to Move Beyond Documents

Key Takeaways

- The success of a digital thread in an extended enterprise heavily depends on high-quality, accurate, and consistent data to ensure it can effectively support decision-making, compliance, and operational efficiencies across diverse and dispersed organizational functions through life.
- Transitioning from reliance on static, document-based data storage to dynamic, structured digital facilitates better data synchronization and accessibility and reduces the risks of data becoming outdated or misaligned with current operational realities, thereby enhancing the integrity of the digital thread.
- Given the complexity of managing data across extended enterprises, there is a clear need for open data management solutions like ShareAspace that can handle the

demands of large-scale, interconnected environments to build robust and effective digital threads based on the Product Lifecycle Support standard (PLCS) ISO 10303-239.

Introduction

In the modern industrial landscape, the adoption of a “digital thread” represents a transformative approach to managing complex data throughout the product lifecycle. A digital thread is a communication framework that allows for a connected workflow and integrated view of the product’s or asset’s data throughout its lifecycle. This framework is essential for creating an integrated view that spans various stakeholders—suppliers, partners, and customers. A well-maintained digital thread fosters a seamless exchange of information, enhancing improved decision-making, advanced analytics, greater efficiencies, and ultimately drives innovation.[\[1\]](#)

The challenge most organizations face is that data resides in siloed systems, often stored in unstructured formats, which quickly become outdated. This can result in costly errors, and negatively impacts operational agility, delays in decision-making, and increases compliance risks. Additionally, the rapid evolution of technology and market demands necessitates swift updates that traditional document-based and unstructured document storage methods cannot support, resulting in fragmented data ecosystems that undermine the integrity of a digital thread. This would even pose a risk to the operating model for any modern enterprise designed to use a digital thread.

Data should be reusable and flow both downstream and upstream through continuous feedback loops. This goes beyond the applications used to establish the thread across traditionally siloed functions within an organization to include a value network of suppliers, partners, and customers. This raises the importance of both data quality and of using a standards-based approach in defining, using, and managing the digital thread across an extended enterprise. Regardless of the applications generating data, all data in a digital thread must be clear, concise, and validated.

Organizations and their extended enterprises suffer from a lack of data quality because in many cases the single authoritative source of truth for the data has not been identified and the data is not being made available where needed. Aside from disconnected data, which will quickly become out-of-sync, people will begin questioning the quality of data and will resort to manually intensive efforts to ensure they have the correct data, which is both unproductive and will result in more quality issues.

One of the common problems is structured product lifecycle data being managed in documents. This is a challenge as the data in the document does not necessarily reflect the most up-to-date product data outside the document. To ensure data quality and synchronization, structured product lifecycle data cannot exist within unstructured documents or other files, but must be exposed and transformed into a structured format. Often, data quality errors occur during product development where the data is not correlated accurately between engineering disciplines, throughout the supply chain, and across different stages of the product lifecycle. In larger, more complex programs consisting of many partners and

suppliers, there are also data quality conflict issues that occur across systems and/or boundaries between different groups.

Data required by organizations downstream are frequently controlled by a contract, where the operator has no ownership of or rights to the data. Handover, commercial agreements, etc., typically contract for a product, but either don't contract for the product information necessary to sustain the product or don't address the data quality aspects of the contracted information. The lack of data quality will manifest itself in inaccurate part numbering, classification, and other metadata errors. This results in a product structure that does not reflect the up-to-date real-world physical product, leading to inefficiencies in manufacturing and support. To compensate for lack of data quality post hand-over is both time consuming and expensive. At a minimum, this causes delays and increases the product's through-life costs. In addition to the effect that poor data quality has on engineering and manufacturing, it negatively impacts support, in-service operations, and the as-deployed operational health and product effectiveness. Furthermore, poor data quality can, in extreme cases, lead to product failure and risk the safety of the operator and/or maintainer.

If the data quality is not approaching 100%, then organizations will not trust the data and will resort to performing manual work and rework to verify the data. In scenarios like this, the organization will suffer defects and potentially degradation of brand reputation.

As we begin to adopt technologies such as Artificial Intelligence (AI) to provide useful insights and automate certain operations, companies with poor data quality will find themselves at a disadvantage. AI models trained on inaccurate data lead to flawed or misleading understandings.

Ensuring Data Quality in an Extended Enterprise

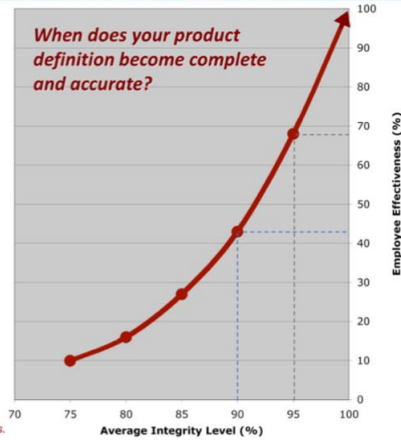
Organizations are transforming by connecting their physical product world with their virtual world by using a digital thread (really a digital web) across the entire product lifecycle including the extended value chain. CIMdata defines a digital thread as a communications framework that shares information across the design, manufacturing, and deployment of a product. It's a data-driven framework that connects different elements to provide an integrated view of an asset throughout its lifecycle. The digital thread can include information about a product's performance and use from design to production, sale, use, and disposal or recycling. This information can provide insights into how customers use products, how they perform, and how they could be improved.

A major challenge is making sure the product information is accurate and complete across the product lifecycle. The integrity of the information is directly linked to the effectiveness of the organization. The integrity of the information is based on the accuracy and completeness of the information used to make decisions. The higher the integrity, the quicker and more accurately an organization can respond as seen in Figure 1.

The Bottom Line: PLM Matters!!

Accuracy & completeness of an organization's information is critical

- The integrity of information and effectiveness of the organization are linked
 - **Integrity** = accuracy and completeness of the information you use to make decisions
 - **Effectiveness** = the ability to respond accurately and quickly



Adapted by CIMdata from ICM's CM2 materials.

Figure 1—Data Integrity Impacts Engineering Efficiency

The consolidation of product lifecycle data from many sources in an extended enterprise exposes poor quality and lack of synchronization. To ensure data quality requires consolidation from multiple sources (i.e., data warehouses, PLM, etc.) so the data is examined, reconciled with the authoritative version, and corrected. This can be complemented by data and security governance, which will protect the owner and the correct source, ensuring rightful access to the data. Cross-disciplinary data should be correlated not only within engineering, but also across the supply chain and throughout all phases of the product lifecycle (i.e., engineering, maintenance, operations). The same is true across systems and/or boundaries between groups with different responsibilities that share interfaces and data.

Data, as it transforms to and from many sources inside or outside a company's boundary must be accurate, coherent, and valid, as it is the only way to achieve a sustainable digital thread. This must be done through data consolidation to confirm and rectify data quality issues.

Oftentimes, organizations are contractually obligated to share data using broad standards such as ISO 10303-242, which leaves room for misinterpretation. Contracts should be more specific regarding the information to be transferred during handover, to prevent costly data quality issues from flowing downstream. Ideally, reference data with KPIs that need to be adhered to should be built into the contract. A simple example would be to include CAGE codes on all part numbers.

Data Quality Lost in Documents

To ensure data quality and synchronization with the most up-to-date information, structured data cannot be mastered in unstructured documents and files but must be transformed into a structured format. Structured product lifecycle data left in unstructured documents leads to discrepancies when the same data is updated outside the document.

By consolidating data in an open, flexible data model, data quality organizations can avoid vendor lock-in. Issues can be addressed post-handover, thereby eliminating delays, and improving a product's cost through-life.

ShareAspace: Consolidating Data for Enhanced Quality and Integrity

Eurostep's ShareAspace addresses the pressing challenges of data integration and quality within the digital thread. ShareAspace standards-based digital collaborative platform is based on ISO standards such as ISO 10303-239 (PLCS) and ISO 10303-242 that support a digital thread across the extended lifecycle. ShareAspace excels in consolidating data from disparate sources into a centralized, structured format. This approach eradicates the common problems associated with siloed information systems, enabling a seamless flow of information that ensures all data elements are synchronized and up-to-date. The resulting continuous digital thread spans the entire value chain, enhancing visibility and control over data processes.

ShareAspace helps organizations move beyond using unstructured documents to becoming data centric. They do this with file-based exchange, controlled document sharing, and contextualized document sharing.

ShareAspace enhances data quality and integrity because it enables organizations to discover data discrepancies. The platform consolidates data from multiple sources with an ability to index unstructured documents and extract data from them into a structured data resource that can then remain synchronized across the product lifecycle. Scraping of documents extracts product data from a document and creates data items, e.g., extracts items and creates explicit relationships between the documents and items. Indexing then enables searching of the content of the document (e.g., find all documents that reference a part or find all documents that have a classification of "secret").

Further enhancing data quality and integrity, ShareAspace's powerful data management features are pivotal. The platform not only indexes and structures unstructured data but also rigorously validates this data against established standards to ensure its accuracy and completeness. Such stringent data management significantly mitigates the risks of errors and inconsistencies, thereby reducing operational inefficiencies and compliance issues. Moreover, by fostering collaboration across various departments and external partners, ShareAspace ensures that sensitive information is protected while remaining accessible to all authorized stakeholders. This elevated level of accessibility supports a more integrated and collaborative approach to product development, manufacturing, and maintenance, breaking down barriers that typically isolate data and impede workflow efficiency.

ShareAspace enables a digital thread—a communication framework that supports the connected data flow across the product's lifecycle from concept through-life with full traceability. A digital thread spans to and from many siloed functional viewpoints that can be both inside an organization's boundary or across the extended value chain.

To maintain a digital thread, effective data governance and security are paramount to the integrity and trustworthiness of the data. This ensures a seamless flow across up-to-date items and safeguards against misuses of critical information. When done correctly, it enables an

organization to collaborate securely with assured data based on their PLCS architecture as shown in Figure 2.

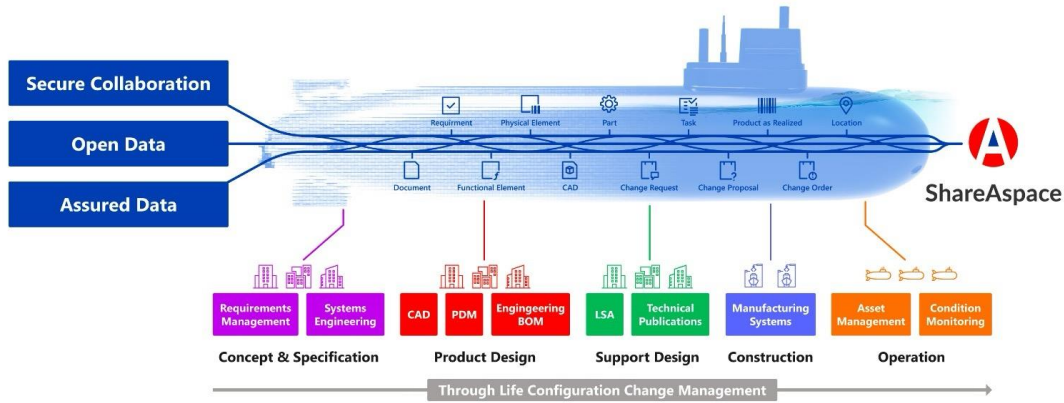


Figure 2—Digital Thread through Controlled Data

ShareAspace enables data to be consolidated, corrected, and synchronized, ensuring it is accurate, coherent, and valid across a digital thread. What differentiates the ShareAspace platform is its ability to integrate multiple sources using a plurality of technologies (i.e., editing tools, team data management tools, etc.) in multiple companies with a comprehensive, flexible data model and digital thread built on open standards.

ShareAspace’s open standards-based platform accommodates these changes, ensuring that data management practices remain robust and continue to support innovation and continuous improvement in product development and lifecycle management. Over time, the efficiencies gained lead to lower operational costs from reduced manual efforts, fewer errors, and optimized resource allocation.

Conclusion

The importance of a reliable digital thread cannot be overstated. CIMdata believes that an enterprise digital thread must be based on a high degree of data quality. Organizations should strive to reach 100% data quality, which reduces the manual efforts necessary to find and correct data, reduces defects, and improves product costs through-life. To ensure data quality and synchronization with the most up-to-date information, structured data cannot exist in unstructured documents. Unstructured product data must be transformed into a structured format. CIMdata is impressed with Eurostep’s ability to index unstructured data, which can then be used as part of the digital thread.

By consolidating data from multiple sources with ShareAspace assures rightful access to the information and protects the intellectual property of the supply chain. ShareAspace enables data to be consolidated, corrected, and synchronized, thereby ensuring the data is accurate, coherent, and valid across a digital thread to support through-life traceability.

The ShareAspace platform integrates multiple data sources from a wide array of heterogeneous technologies across multiple companies with a comprehensive, flexible data model, and a

thread built on open standards. CIMdata encourages organizations with a large complex supply chain or an internally complex organization that need to improve their data quality, to consider evaluating Eurostep's ShareAspace.

[1] Research for this paper was partially supported by Eurostep.

CIMdata to Host a Free Webinar on Data Governance

11 September 2024

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces an upcoming free webinar, "The Importance of Comprehensive Product Data Governance." The webinar will take place on Thursday, 11 October 2024, at 11:00 a.m. (EDT) and will last one hour.

As products evolve with the integration of AI, pervasive computing, and advanced sensing technologies, they are becoming smarter and more responsive to real-world usage and operating environments. The rise of electronic components is accelerating the introduction of affordable sensing into products. Virtual engineering strategies require the support of a digitalized ecosystem that understands mechanical structures (PDM) and manages the complexities of software applications (ALM). Continuous feedback from product operations allows for ongoing upgrades even after mass production, making Comprehensive Product Lifecycle Data Governance more critical than ever.

The webinar will help attendees learn why effective Product Lifecycle Data Governance is crucial and why and how PDM and ALM are becoming increasingly systems-focused as products evolve into systems of systems.

This webinar will help attendees to:

- Understand why the complexities of today's product systems are forcing changes in strategies for using PDM with ALM to achieve Comprehensive Product Data Governance.
- Understand how SysML's Team Data Management and Process and Product Backbone can provide a cohesive architecture for integrating all xLMs across the entire product lifecycle.
- Gain insights into why it is essential to expand Comprehensive Product Data Governance beyond design and manufacturing, ensuring consistent control and governance across the entire product lifecycle.

Janie Gurley, CIMdata's Data Governance Director and co-host for this webinar, said, "With the growing complexity of today's product landscape, comprehensive product data governance is no longer a luxury—it's a necessity. It enables seamless team management and a strong process backbone, both vital for the next generation of products. Embracing digital transformation unlocks new opportunities and provides a competitive advantage in product development."

Craig Brown, Executive Director at CIMdata, added, “Data from experiences provides insights leading to understanding. The key to managing complexity is learning where to adapt a product based on its actual use. A decade ago, this was done through customer clinics and usage surveys. Today, the data is available in real-time, opening new opportunities for building product safety while adding new features, all without repeating mass production in a brick-and-mortar factory. Digital tools must help us manage this opportunity to enable robust, safe operations of complex products. They require an overall PLM architectural framework that specifies how integration and cross-discipline applications can work.”

This webinar will be pertinent and valuable to people from multiple levels of an organization, including senior and middle managers, development engineers, operations and customer service, IT, and anyone enabling or impacted by how an organization adopts new digital strategies to support product programs.

During the webinar, attendees will have the opportunity to ask questions about the topics discussed. To find out more, visit <https://www.cimdata.com/en/education/educational-webinars/webinar-the-importance-of-comprehensive-product-data-governance>. To register for this webinar, please visit <https://register.gotowebinar.com/register/294785005781589592>.

CIMdata to Join a Panel of Experts on the Application of AI/ML Technologies in Product Development and Simulation

9 September 2024

CIMdata, Inc., the leading global research, consulting, and education firm specializing in Product Lifecycle Management (PLM) and the Digital Transformation it enables, announces that Sandeepak Natu, Co-Director of the Simulation-Driven Systems Development Consulting Practice, will participate in an online discussion, “AI/ML in Simulation and Product Development.” The discussion, organized by REVOLUTION™ in Simulation, takes place on Thursday, 26 September, at 11:00 AM EDT.

This discussion is the first in a series planned on this topic and is part of a recently announced initiative, REVOLUTION in Simulation’s AI/ML in Simulation learning program. CIMdata is a founding partner of this program, which will provide the simulation community with a wide array of valuable resources to educate and advocate the power and use of AI/ML in Simulation.

According to Sandeepak Natu, enhancing human productivity by incorporating AI/ML methods aligns with CIMdata's focus on 'Augmented Intelligence,' a theme the organization has championed over the last five years. “Engineering leaders must stay informed about these technologies and take proactive steps to integrate them into their processes. The new Rev-Sim AI/ML program, which includes this panel discussion, is an exceptional resource, offering a comprehensive pathway for Simulation professionals to explore this rapidly evolving field. It offers curated learning, expert guidance, and a collaborative community—key elements for maximizing the potential of AI/ML in engineering simulation and product development. By participating in this program, we can collectively push the boundaries of what's possible in simulation.”

To learn more and register for the panel discussion, please visit <https://revolutioninsimulation.org/ask-the-experts-general-qa-panel-session-on-ai-ml-in-simulation-and-product-development/>. Registration is required.

How SAP PLM Addresses the Mid-Market - a CIMdata Commentary

12 September 2024

Key Takeaways

- Mid-market companies need robust, cost-effective, easy-to-implement PLM deployed on the cloud.
- PLM solutions from SAP provide SaaS-based cloud offerings based on microservices making them cloud-native as opposed to just hosting on-premises software in the cloud. In addition, they can be directly connected to S/4HANA, or ERP and other PLM solutions based on the needs of the company.
- SAP's PLM software provides all the core PLM capabilities product-centric companies require, including idea campaigns (including voice of customers), requirements/specification management, CAD integration, recipe formulations, collaboration, BOM management, document management, variant management, change management, portfolio and project management, systems engineering, product visualization, and collaboration with procurement and other departments, even beyond the enterprise with suppliers.
- SAP provides a comprehensive set of integrations to support a company's ecosystem, including multiple mechanical computer-aided design (MCAD), electronic computer-aided design (ECAD), ERP, and PLM integrations.

Introduction

Product Lifecycle Management (PLM) is a strategic business approach that holds great promise for mid-market companies, helping streamline their product development processes. Despite the potential benefits, these companies often encounter myriad challenges in adopting and effectively using PLM-enabling software. These challenges include high costs, complexity, lack of user-friendliness, and integration issues, coupled with a deficiency in awareness and expertise. Mid-market companies require an affordable PLM solution that can deliver tangible benefits in a short timeframe, enabling them to keep pace with larger competitors and evolving market demands.^[1]

Mid-market companies frequently cite several objections to implementing PLM software. High cost is a primary concern, as these companies often operate on tight budgets and cannot afford the substantial investment required for PLM software, customization, and ongoing support. Complexity is another major hurdle; PLM software can be overly intricate, making it difficult for smaller teams to manage it effectively. Not all PLM solutions are user-friendly, posing a significant barrier to widespread adoption within an organization. Additionally, the lack of flexibility in some PLM-enabling solutions makes it challenging for mid-market companies to tailor the software to their specific needs. Finally, these systems are often not open to

integrating with existing systems, which is a serious obstacle to driving efficiencies across their business.

Mid-market organizations are not strictly defined by their size, but rather by the complexity of the products they produce and their budget constraints for software and support. These companies often have limited internal IT resources to support PLM implementations and maintenance. Today, many mid-market PLM users restrict their use to Product Data Management (PDM) functionality, such as document management, CAD management, Bill of Materials (BOM) management, and change management within engineering. This narrow use of PLM indicates a gap between the potential of PLM-enabling solutions and their actual utilization in mid-market companies.

There are several factors that contribute to the limited use of PLM-enabling solutions as an engineering PDM tool, rather than a comprehensive solution for PLM. Different disciplines within a company may have evolved separately, leading to fragmented PLM adoption. Historically, PLM-enabling solutions have been mechanical in nature, but there is now a shift towards smart, connected products, which mid-market companies may not be fully equipped to handle. Mergers, acquisitions, and reorganizations further complicate PLM implementations.

The technology infrastructure of mid-market companies presents additional challenges. Many still host PLM technologies on-premises, leading to difficulties in managing disconnected, outdated, and vulnerable systems. The lack of IT resources and expertise exacerbates these challenges, preventing effective management and optimization of PLM software.

A significant obstacle for mid-market companies to overcome is the lack of awareness of the potential PLM benefits. Suboptimal PLM strategies often result in fragmented product data across departments, lack of visibility across the product lifecycle, and challenges in cross-functional collaboration both within the company and across the supply chain. CIMdata's experience is that many mid-market companies face time-to-market delays, experience inconsistent product quality, deal with inefficient change management, and struggle to meet regulatory requirements. Resource allocation issues and difficulties in managing sustainability further compound these problems.

Key Mid-Market Requirements for PLM

Mid-market companies seek PLM solutions that are affordable, scalable, easy to implement and use, are modular and flexible, and can seamlessly integrate within their existing environment. The rise of cloud-native software-as-a-service (SaaS) offerings has made it easier for companies to achieve these objectives. SaaS solutions provide a cost-effective, scalable, and user-friendly approach to PLM, allowing mid-market companies to adopt the best possible infrastructure without the need for extensive IT infrastructure or expertise. Cloud-based PLM solutions offer several advantages, including reduced IT maintenance, automatic updates, and improved security. This approach allows mid-market companies to leverage state-of-the-art technology without the burden of managing and maintaining complex IT systems.

Budgetary constraints are a significant concern for mid-market companies. They seek PLM-enabling solutions that offer competitive pricing models such as subscription-based pricing or

flexible licensing options. While mid-market companies do not operate on the scale of larger companies, they still require PLM-enabling solutions that can grow with their business. Scalability ensures that the PLM solution can accommodate increasing product functionality, user counts, and data volume without significant disruption or cost escalation.

Ease of implementation and use is critical for mid-market companies, which typically have smaller IT teams and may lack extensive dedicated PLM expertise. As a result, they value PLM solutions that are easy to implement, configure, and maintain without requiring extensive technical knowledge. User-friendly interfaces and intuitive workflows are essential for ensuring widespread adoption across different departments, minimizing the learning curve and enabling greater adoption.

Mid-market companies require PLM solutions that can seamlessly integrate with their existing business applications, such as ERP, CRM, and CAD software. Modular architectures and configurable capabilities are highly desirable for mid-market companies, as they allow these businesses to tailor the PLM system to their specific needs without unnecessary complexity or overhead.

Collaboration and the ability to streamline processes across the product lifecycle is critical for all companies. Mid-market companies look for PLM-enabling solutions that can facilitate collaboration across cross-functional teams and throughout the product lifecycle including suppliers, partners, and customers.

Historically, mid-market companies have not managed product data effectively outside of engineering. As their products become more complex, they are now looking to expand their PLM capabilities to cover the entire product lifecycle, from concept via re-use until disposal, including areas such as requirements management, systems engineering, and sustainability.

Given their limited IT resources, mid-market companies value responsive customer support and comprehensive training programs. They are looking to maximize the value of their PLM investment by addressing technical challenges as quickly as possible.

SAP's Approach to Mid-Market PLM

SAP's approach to PLM offers a comprehensive product data backbone and an integrated collaboration environment, enabling companies to define, develop, deliver, and manage products efficiently across the extended enterprise. As depicted in Figure 1, PLM from SAP enhances efficiency, transparency, and decision-making throughout the product lifecycle. It manages product data and assets end-to-end, supporting the creation of innovative and sustainable products.

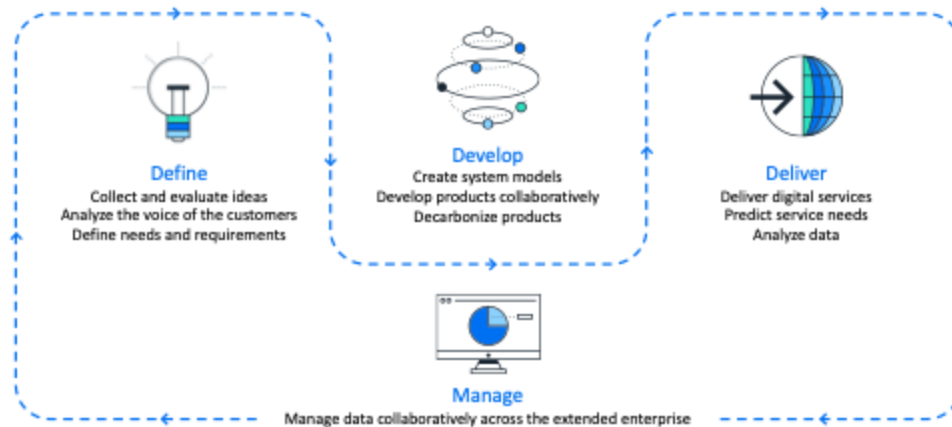


Figure 1—SAP’s PLM Framework
 (Courtesy of SAP)

The framework for PLM solutions from SAP is structured around three key business process phases and one cross-layer:

- **Define:** Collect ideas, prioritize needs, and define product and project requirements based on customer feedback and market insights.
- **Develop:** Develop and industrialize intelligent and sustainable products across the extended enterprise.
- **Deliver:** Leverage product information across the enterprise to support digital thread initiatives and closed-loop feedback processes.
- **Manage:** Design with cost, compliance, and sustainability in mind throughout the entire product development lifecycle.

PLM from SAP provides foundational PDM capabilities such as BOM management, document management, variant management, change management, portfolio and product management, enterprise visualization, and product compliance. It integrates seamlessly with both CAD and PLM systems, ensuring comprehensive support for product data management.

Mid-market companies cannot afford to ignore the shift to the cloud. They lack the resources to provide the IT infrastructure, services, and security that public cloud providers offer. Additionally, they often do not have the capacity to adequately support the on-premises hardware needs of their PLM user base. SAP, traditionally known for its leadership in the ERP market with solutions like S/4HANA, has pivoted to support mid-market companies with more affordable SaaS offerings targeting both ERP and PLM. These cloud-native applications, built with microservices offer a significant advantage over merely hosting an on-premises version in the cloud. By architecting cloud-native applications with microservices, SAP’s PLM can offer improved scalability, flexibility, resilience, and optimized performance, which translates to faster and more flexible updates, consistent performance, and reliability for the end-user.

The PLM solutions from SAP are supporting extensive design tool integrations through SAP PLM as well as through SAP’s Engineering Control Center (ECTR). This includes MCAD integrations

with tools like NX, Creo, CATIA, Autodesk Inventor, Solid Edge, and SOLIDWORKS, as well as ECAD integrations with Altium, Cadence, and Siemens Mentor. The PLM system integration also enables bi-directional engineering data exchange between S/4HANA and Siemens Teamcenter, PTC's Windchill, Dassault Systèmes 3DEXPERIENCE platform, and Autodesk Vault (planned for end Q3/24).

SAP PLM software can take advantage of S/4HANA for ERP and enable procurement, manufacturing, supply chain planning, logistics, and operations leveraging the same PLM data via a digital thread along the digital supply chain. Moreover, SAP offers SAP GROW, which includes adoption acceleration services, community, and learning, so any size company can be successful adopting cloud ERP to accompany their mid-market SAP PLM.

As mid-market companies' product offerings grow more complex, they need to enhance their product data with additional PLM capabilities. The solutions for PLM from SAP provide all the core PLM capabilities product-centric companies require including idea campaigns (including voice of customers), requirements/specification management, CAD integration, collaboration, BOM management, document management, variant management, change management, portfolio and project management, systems engineering, product visualization and collaboration with procurement, and other departments, even beyond the enterprise with suppliers. SAP's PLM offers these capabilities, enabling full traceability and transparency by connecting requirements to business and product data. Additionally, SAP's PLM supports systems modeling, helping engineering teams maintain a common reference point for all system models to improve communication and collaboration.

In addition to discrete manufacturing industries, SAP's PLM also caters to process industries such as Consumer Products, Chemicals, Oil & Gas, and Life Sciences. It includes capabilities for recipe formulation and managing and comparing specifications in a central repository, serving as the source of truth for product, raw material, and packaging properties with the support of AI functionality from Joule.[\[2\]](#)

With sustainability and regulatory compliance becoming critical concerns, solutions for PLM from SAP drive product innovation and transformational sustainability through a broad application portfolio. This includes environmental, social, and governance (ESG) reporting, carbon footprint tracking from operations including Scope 1, Scope 2, and Scope 3 product carbon footprint (PCF) and the SAP Sustainability Control Tower (SCT), which integrates reporting and performance to enable customers to set and monitor sustainability targets. Stakeholders want to know the origin and sustainability of their products. SAP Green Token supports material traceability and transparency with segregation or mass balancing, tokenization, and a blockchain-based chain of custody for trust and compliance using recognized standards: ISCC, RSPO, REDcert, and EUDR.[\[3\]](#)

Directly integrated AI with SAP's PLM can combine market trends, customer feedback, and competitive information with the structured data from PLM to iterate product designs much faster. The use of AI is transformative as it enhances decision-making by providing data-driven insights that enable routine tasks to be automated, driving innovation and increasing efficiency and productivity. SAP's AI capabilities can help companies quickly identify exceptional features

faster, enabling them to deliver unique and competitive products to market faster giving them a competitive edge.

SAP PLM's SaaS cloud offering empowers mid-market companies by creating closed-loop processes and a digital thread from idea to disposal while enabling circular products. Mid-market companies can quickly collect actionable insights across functions to accelerate product development that produce high-quality, sustainable, and innovative products at a reasonable cost.

Conclusion

SAP addresses the needs of mid-market companies by providing SAP PLM, a robust cost-effective, and easy-to-implement solution that leverages the advantages of cloud technology. CIMdata is impressed with SAP's cloud-native SaaS offering based on microservices, rather than merely hosting on-premises software in the cloud. This approach ensures scalability, flexibility, seamless updates, which are important consideration for mid-market companies that cannot afford to manage on-premises enterprise solutions.

CIMdata believes mid-market companies can benefit significantly from SAP PLM, as it encompasses all core PLM capabilities essential for product-centric businesses from idea and concept through life via re-use until disposal enabling seamless interactions not only within the enterprise but also with the extended supply chain.

CIMdata is impressed with SAP's extensive set of integrations that support a company's existing environment. This includes integrations out-of-the-box with various MCAD and ECAD solutions, as well as S/4HANA or other ERP and enterprise solutions including other PLM-enabled software. These integrations ensure that all relevant data and processes are interconnected, enhancing efficiency and reducing the risk of errors. By providing a comprehensive, cloud-based PLM solution that is both cost-effective and easy to implement with robust integration capabilities, SAP helps mid-market companies achieve their product lifecycle management goals effectively and efficiently. CIMdata recommends that any mid-market company considering PLM include SAP in their technical evaluation.

[1] Research for this paper was partially supported by SAP.

[2] Joule is the AI Co-Pilot from SAP. (2024: SAP <https://www.sap.com/products/artificial-intelligence/ai-assistant.html>)

[3] See: <https://www.sap.com/products/scm/green-token.html>

Company News

AGA CAD changes its name to ARKANCE LITHUANIA

4 September 2024

IT company AGA CAD, UAB, known for developing Be.**Smart** software solutions, has changed its legal name to ARKANCE LITHUANIA, UAB, after 33 years in business. The change was officially registered on August 29, 2024.

This comes after a series of transformations, starting in 2021, when AGA CAD joined international IT group ARKANCE. In 2023, ARKANCE continued to grow by acquiring SBS Group, another Lithuanian IT company in the construction market. The official renaming to ARKANCE LITHUANIA marks the final step in merging AGA CAD and SBS Group under the ARKANCE umbrella.

“We aim to become a company that can better meet our customers’ expectations. The new name ARKANCE LITHUANIA will better reflect the company’s presence as part of a large international organization, its ambition to achieve the company’s goals, its maturity within the Group and the strengthening of its software development competences. The biggest benefit of the change for our clients is that they will be able to receive the highest quality services from a large network of specialists from a multinational corporation,” says Renata Jočienė, the company’s Managing Director.

The word ARKANCE is inspired by the Greek word “arkè” (meaning “beginning, direction”) and the English word “advance” (meaning progress and future). The name encodes order and decisiveness, as well as coordination and the desire to contribute to projects that help construction and manufacturing companies realize their digital potential. The ARKANCE Group’s vision is to help the construction and manufacturing sectors to design and build buildings smarter, with better control over project costs and deadlines. ARKANCE LITHUANIA’s customers can buy from a single supplier all the tools they need to efficiently design, implement and operate buildings and products in a cost-effective and sustainable way.

It is important to note that, apart from the name change, all other Company data, office address, and bank details remain unchanged. **All contracts, agreements, and obligations** of the company to its employees and customers, undertaken on behalf of AGA CAD, UAB, **will continue** under existing terms and conditions.

The new name allows the company to operate more efficiently, flexibly and smartly, increasing consistency and association with the international corporation ARKANCE. As part of an international group, ARKANCE LITHUANIA has more resources to develop the competences of its specialists and provides a wider range of opportunities and higher quality services to its clients.

The company’s name has been changed along with its logo. The company’s other visual identifiers will also be updated, including a new website, new email addresses. The company’s main email address for enquiries about Be.**Smart** products is now info@besmart.software. The email addresses of the company’s employees will end with @arkance.world.

Aramco Digital and Accenture Partner to Revolutionize Digital Skilling Capabilities and Forge an AI-Ready Workforce in Saudi Arabia

12 September 2024

Aramco Digital, the digital and technology subsidiary of Aramco, and Accenture have formed a strategic partnership to fuel generative AI (gen AI) innovation and supercharge the digital skilling agenda in Saudi Arabia.

The partnership aims to empower Saudi Arabia to adopt and innovate with gen AI at scale, helping the Kingdom address the evolving digital talent requirement across industries and contribute to the Kingdom's Vision 2030.

Aramco Digital will leverage Accenture LearnVantage's AI-native platform, which uses a gen AI recommendation engine to curate learning content and offer deep capabilities—from skill gaps assessment and personalized learning to certifications—aligning individual learning needs to the organization's and national growth priorities. This cloud-based platform will also bring in a wide network of Arabic and English trainers and mentors from Accenture, including leading players across industries and academia.

Through the delivery of its comprehensive gen AI learning platform, Accenture will equip the company's entire workforce with foundational and specialized AI skills, including the responsible use of AI, and help Aramco Digital in its pursuit of becoming the largest provider of gen AI services in Saudi Arabia.

"Gen AI will continue to reshape the business sectors and the talent landscape in our Kingdom. We are partnering with Accenture to ensure we are not only prepared for the gen AI transformation but are well positioned to lead it," said Tareq Amine, CEO of Aramco Digital. "And we are excited to work alongside them to bring our deep capabilities and digital solutions in gen AI learning to market to serve the Kingdom's workforce and help advance us toward achieving Vision 2030."

The two companies will further collaborate to drive even greater AI fluency by bringing such capabilities to serve other organizations in the Kingdom and, ultimately, develop the talent needed to navigate changes brought by technological advancements and achieve greater value for the future.

"We are passionate about helping organizations in Saudi Arabia become talent creators and contributing our extensive knowledge and capabilities to transform the way people learn," said Omar Boulos, CEO of Accenture Middle East. "Our collaboration with Aramco Digital marks a significant step toward strengthening the Kingdom's workforce with the skills of the future, and builds upon our existing commitment to support this dynamic market through digital skilling."

"Powered by its cloud-based and AI-native platform, Accenture LearnVantage will play a critical role in accelerating digital skilling and ensuring learning effectiveness," said Kishore Durg, Global Lead of Accenture LearnVantage. "We are excited to partner with Aramco Digital to deliver innovative solutions and help the Kingdom forge future-ready workforces."

[BobCAD-CAM Commits to Manufacturing Data Exchange Specification MDES®](#)

9 September 2024

ModuleWorks announces that BobCAD-CAM is adopting the Manufacturing Data Exchange Specification (MDES®). In committing to MDES, BobCAD-CAM joins a growing coalition of companies using MDES to simplify data exchange across the manufacturing industry.

BobCAD-CAM has made its mark as an easy-to-use CAD-CAM system, giving individuals and machine shops affordable access to professional milling and turning. Adopting MDES complements the BobCAD-CAM philosophy, making it easier for users to share manufacturing data with other MOES-compatible systems, including software solutions, machine tools and robots.

“There are lots of different manufacturing systems, and our users need to be able to transfer precise machining data to each of them. This not only complicates their data workflows, but also increases our software development costs because we need to maintain interfaces to each system,” said Alexander Cole, VP, Research & Development at BobCAD-CAM. “This is why we are offering MDES in our upcoming software release. MDES aligns perfectly with our philosophy of open, easy-to-use software by providing a common platform for sharing data between any system without the need for custom bridges. Our users benefit from simplified workflows and we significantly reduce our development costs. It’s a win-win situation.”

BobCAD-CAM joins companies such as Autodesk, CHIRON Group, Cimsourc, DN Solutions, SolidCAM and PTC among others who are implementing the open MDES standard to reduce development overheads and streamline data exchange between different platforms and solutions. The aim is to create an evolving ecosystem that enables companies to simplify manufacturing dataflows and foster an environment of interoperability and collaboration across the industry.

“We introduced MDES to address the need for more accurate, consistent and secure data exchanges in the manufacturing industry,” explained Dr. Yavuz Murtezaoglu, Founder & Managing Director of ModuleWorks. “It’s great to see BobCAD-CAM joining the growing MDES community. As more and more companies use MDES, we will start to see improved interoperability between different systems, less errors and greater collaboration across various platforms and stakeholders.”

Digital Twin Consortium Expands Scope by Encompassing Digital Engineering Methodologies

10 September 2024

The Digital Twin Consortium® (DTC) announced a significant expansion of its scope to include the development and execution of advanced digital engineering methodologies throughout the digital twin lifecycle. This progression builds upon the consortium’s expertise in digital twin methodology and enabling technology. It expands the DTC’s focus to cover the key domains and disciplines throughout the digital engineering ecosystem, including Model-Based System Engineering (MBSE), digital thread, and related strategies.

By integrating advanced methodologies and leveraging industry-wide adoption of DTC existing frameworks and new work products in progress, the consortium is working to develop further and drive the adoption of leading practices for the digital engineering ecosystem.

“This expansion represents a natural evolution of our mission,” said Dan Isaacs, CTO and GM of the DTC. “By embracing a wider range of digital engineering practices, augmented where most beneficial by the infusion of AI including Multi-Agent GEN AI, DTC is well positioned to enhance the digital engineering ecosystem further and address the complex challenges facing the industry today.”

Key benefits of this expanded focus include:

- Improved integration of digital twin technology through advancements in digital engineering practices
- Strengthened security and trustworthiness, including AI-integrated approaches in digital engineering processes
- Enhanced data strategies and frameworks for increased accessibility and traceability towards improved interoperability
- Increased collaboration opportunities across various digital engineering disciplines

“Through our member’s value-driven innovation, collaboration, and demonstrated thought leadership, DTC is committed to driving continuous growth and evolution across the digital engineering landscape,” added Isaacs. “This expansion, coupled with the integration of AI technologies, positions DTC at the forefront of digital transformation efforts across industries.”

DXC Technology Opens New Center of Excellence in Zaragoza to Increase Artificial Intelligence and Cloud Adoption for Spain’s Biggest Organizations

12 September 2024

DXC Technology, a leading Fortune 500 global technology services provider, announced it has opened a new Center of Excellence in Zaragoza, Spain, to help clients unlock AI’s full potential, manage their most critical workloads, infrastructure and operations in the cloud, and keep data safe and secure wherever it’s located.

Expanding its existing operations, DXC’s engineers and technology experts working in Zaragoza will use their deep industry knowledge and expertise to support Spain’s biggest public and private sector organizations. The Center will showcase the latest cloud technologies enhanced by DXC engineers, integrating artificial intelligence into platforms that support applications and solutions to help clients modernize operations, products and services.

The Center of Excellence builds on DXC’s commitment to its customers in Spain, having opened a generative artificial intelligence Center of Excellence in Santiago de Compostela in 2023 and aiming to create hundreds of jobs in Zaragoza in the next five years in partnership with Amazon Web Services (AWS).

Teams working in the new Center will also be focused on enhancing global e-commerce strategies so customers can improve operational efficiency and reduce costs by automating inventory tracking and optimizing stock selection through AI-powered logistics and warehouse management support.

“We’re excited to grow our operations with this new Centre of Excellence, allowing us to work more closely with clients and partners,” said Alfonso Garcia Muriel, Managing Director of DXC Technology Spain. “We are committed to providing our customers with the latest AI and cloud-based solutions to improve their operations. Our continued investment and presence in Zaragoza will undoubtedly strengthen our position as a top IT services provider and foster an environment where our colleagues can thrive and contribute to Spain’s bright technological future.”

The opening ceremony event was attended by over 150 customers and partners, as well as local and national government officials including Jorge Azcón, the President of the Government of Aragon, and Natalia Chueca, the Mayor of Zaragoza.

“We’re delighted to see companies like DXC invest in the region, helping grow our capabilities, create jobs, and make Aragon a powerhouse of technological innovation in Spain” said Azcón. “DXC is helping upskill local talent and driving change in both the public and private sector, not only in Aragon but across Spain which is improving the lives of millions of citizens”.

In addition to Zaragoza, DXC will continue to deliver AI and innovation for its customers from 12 sites across Spain including in Madrid, Barcelona, Alicante and Girona.

GelSight and Flexxbotics Partner for Robot-enabled Precision Inspection with Autonomous Process Control

5 September 2024

Flexxbotics, delivering digital solutions for robot-driven manufacturing at scale, announced a new partnership with GelSight, a pioneer in tactile intelligence technology, to provide a joint solution for robot-enabled nondestructive testing (NDT) with autonomous process control. The joint solution incorporates GelSight’s tactile sensing technology into Flexxbotics for advanced robotic machine tending with highly precise quality inspection and digital thread traceability that reduces time-to-inspect by 40% or more.

Next generation smart factories – in aerospace, defense, medical devices, automotive and other industries where measurement accuracy is critical in tight tolerance processing – can now utilize industrial robots and collaborative robots to dramatically speed up inspection processes, increase throughput, and improve margins. GelSight’s unique technology uses 3D imaging to map surface finish and defects on any material, anywhere at the micron level. By robot-enabling GelSight’s tactile sensing devices with Flexxbotics, companies can rapidly perform hundreds of precision measurements during processing on the production line, as opposed to transporting parts to specialized lab equipment or relying on outside laboratory services.

Flexxbotics provides interoperable communication between the robots and GelSight devices coordinating the entire process and connecting directly with existing business systems in the

plant including the CAD/PLM, QMS, IIoT and others for closed-loop quality compliance. Geometric Dimensioning and Tolerancing (GD&T) for each part is automatically fed by Flexxbotics directly into the robot and GelSight programs assuring critical characteristic measurement integrity with inspection results collected for nonconformance tracking and analysis. Optionally, data can transfer to quality repositories and MES systems of record. Flexxbotics also sends defect alerts in text and email with prior operations receiving escalations for root cause identification and processing corrections based on autonomous process control instructions from Flexxbotics.

“Together GelSight and Flexxbotics provide a new level of inspection productivity, scrap reduction, and cost savings using tactile sensing and production robotics,” said GelSight CEO Youssef Benmokhtar. “Now, even the most challenging aspects to dimensionally measure accurately can be consistently inspected in a fraction of the time using robotics.”

“We believe robot-driven manufacturing is the future, and our partnership with GelSight combines some of the most advanced automated inspection capabilities on the planet with Flexxbotics production robotic orchestration for next level factory autonomy,” explained Tyler Bouchard, CEO & Co-founder of Flexxbotics. “Using GelSight tactile sensing to inspect during production enables robots to achieve micron-scale measurement accuracy bringing autonomous process control with Flexxbotics to the most complex geometry parts.”

ModuleWorks and Toolpath Announce Technology Partnership Driving Cloud-Based CAM Automation

9 September 2024

ModuleWorks, a leading innovator in toolpath generation and simulation software for digital manufacturing, and Toolpath, a developer of a new cloud-based, AI-driven manufacturing workflow automation platform, have signed a multi-year technology partnership focusing on accelerated deployment of innovative cloud computing technology for machining estimation and CAM automation.

The technology partnership focuses on accelerating the development of unique and innovative software solutions that automate tasks for shop owners, estimators, planners and CNC programmers. Since its introduction, the Toolpath platform – built using specialized optimization methods and Artificial Intelligence – has included proven technology from ModuleWorks. The extended technology partnership will focus on accelerating the performance of both companies’ software and the eventual integration of the full range of ModuleWorks functionalities into the Toolpath platform.

Al Whatmough, CEO of Toolpath, explains: “Toolpath’s vision is to empower manufacturing professionals from the front office to the shop floor with a tool that, much like an autopilot in aviation, allows them to focus on higher value tasks as opposed to the time-consuming, but necessary, tasks of reviewing incoming RFQs, evaluating the machinability and viability of potential work, and then calculating the cost estimates based on real-world variables like their actual tooling and machining resources.

To accomplish their mission, Toolpath has already started building a strong network of advisors drawn from the broad machining community, and many of their executives have been actively engaged in the industry over the past ten to fifteen years. Additionally, they are developing highly optimized algorithms and AI solutions. They are committed to delivering what machinists deserve and they trust ModuleWorks as a dedicated partner in their journey.

“ModuleWorks and Toolpath have an aligned vision,” said Dr. Yavuz Murtezaoglu, Founder & Managing Director of ModuleWorks. “We want to develop the best technology – empowering professionals in manufacturing – and get it to them fast. This is only possible with trusted partnerships and aligned software development. Because Toolpath has leveraged ModuleWorks technology from the beginning, we can move quickly to empower users with highly intelligent cloud-based manufacturing solutions for machining estimation and CAM automation.”

Toolpath is introducing the first component of its platform, AI-driven, automated estimating, at IMTS 2024. Toolpath is located in the South Hall, Booth 338248 – Level 3.

ModuleWorks is also exhibiting at IMTS 2024 in two locations: In the Software area located in the East Building, Level 3 Booth 133313, and in the Additive Manufacturing area in the West Building, Level 3, Booth 433014.

Siemens Xcelerator: DMG MORI, Renishaw, and Siemens are working as innovation partners and expanding digital offerings for machine tools

10 September 2024

Siemens is consistently expanding its ecosystem for the machine tool industry. Together with its partners DMG MORI and Renishaw, the technology company is presenting new offerings as part of Siemens Xcelerator. With a focus on scalability and high flexibility, there are now even more intelligent machining applications for CNC users that seamlessly complement the Siemens solutions and deliver a high value-add based on them. The open digital business platform Siemens Xcelerator thus creates a powerful ecosystem of partners to jointly accelerate the digital transformation of the industry.

Renishaw: Quality monitoring of tools at the highest level

The Siemens Xcelerator offering from Renishaw consists of a solution for measuring and monitoring the condition of tools. The basic system is already offered by DMG MORI. The solution is based on a high-precision laser system for tool measurement from Renishaw and the edge-based analysis software Analyze MyWorkpiece /Monitor from Siemens. The condition monitoring solution enables the automatic validation of tool wear and the timely automatic replacement of worn tools. The solution also ensures that the manufacturing process is traceable thanks to data evaluation. The fast tool inspection by optical scanning reduces manual intervention and therefore disruptions within the manufacturing process. The data-driven analysis approach ensures the traceability of the manufacturing process, which closes the loop in terms of quality assurance and production planning (closed-loop manufacturing). At

AMB, the solution will be on display for the first time at DMG MORI (Hall 10) and at Renishaw (Hall 7, booth A11) on a DMU 60 eVo.

DMG MORI: Scalable offering for the end-to-end digital twin for machine tool machining at the Siemens Xcelerator Marketplace

The manufacturer of high-precision machine tools, DMG MORI, is expanding its offering for the end-to-end digital twin for machine tool machining on the Siemens Xcelerator Marketplace. Specific solutions for the digital twin of the control system, machine, and workpiece will be presented for a variety of applications. This makes it possible to optimize machining processes long before the real machine is put into operation. Based on the digital native CNC Sinumerik One, the portfolio includes a tailored digital twin for the user – regardless of the shop floor or CAM applications. For example, machine operators on the shop floor can purchase a digital twin package that allows them to create a simple NC program on the PC and thus carry out a collision check without using the machine. A CAM user, on the other hand, can create sophisticated parts in a CAD environment and perform a quick initial validation of the program. With DMG MORI's new, scalable digital twin offerings, customers can now individually determine the scope of the required simulation and purchase the corresponding packages.

The DMG MORI digital twin for machine tool machining helps to avoid programming errors that cause rejects and damage to the actual machine. It can ramp up production up to 40 percent faster, significantly reducing the energy consumption of the real machine. Even new processes can be set up digitally while the machine is in operation. It also helps to reduce unproductive machine times, such as test machining, by as much as 75 percent. This is because the testing and running-in of programs is transferred from the actual machine to the virtual world.

Tata Technologies appoints Geena Binoy as Chief Human Resources Officer (CHRO)

9 September 2024

Tata Technologies, a leading global engineering and product development digital services company, is pleased to announce the appointment of Ms. Geena Binoy as its new Chief Human Resources Officer (CHRO) w.e.f. September 10, 2024. Geena, already part of the Executive Leadership Team and currently responsible for global delivery for Digital Enterprise Solutions (DES), will be instrumental in driving Tata Technologies human resources strategy, focusing on talent supply chain and talent development, supporting the company's ambitious growth plans. Geena's appointment underscores the company's commitment to nurturing internal talent and providing them with growth opportunities. This leadership transition marks a new chapter in Tata Technologies people strategy, following the progress made under the stewardship of Mr. Pawan Bhageria, who has been instrumental in advancing the company's human resources strategy over the past few years. As Pawan transitions to focus on scaling the company's education initiatives, we extend our sincere gratitude for his invaluable contribution.

In her new role, Geena will lead efforts to strengthen Tata Technologies culture of learning, innovation, and inclusivity, ensuring the talent ecosystem supports the company's ambitious expansion. As the company continues to expand its global footprint and strengthen its capabilities in the vehicle software area, Geena will focus on creating an environment that

engages the next-gen vehicle software engineers that we are likely to onboard to drive the next phase of the company's growth. She will charter the HR strategy that enables the right culture and mindset needed for Tata Technologies ambitious growth plans.

Commenting upon this development, **Warren Harris, CEO & Managing Director**, of Tata Technologies, stated, "As we embark on a new phase of growth and innovation, our focus remains on fostering a culture that drives ambition and alignment throughout the organization. Under Pawan Bhageria's leadership, we have established a solid foundation, and with Geena's appointment, we are confident that our people strategy will be perfectly aligned with the next stage of our growth. Her leadership will be instrumental in ensuring our teams thrive and succeed in an increasingly dynamic global environment."

Excited about this new opportunity, **Geena Binoy, CHRO**, Tata Technologies, stated, "Stepping into this new role at Tata Technologies is a tremendous privilege. Our teams embody our company's core values, serving as advisors to clients, mentors to our teams, and innovators within the business. I look forward to building on the strong foundation laid by Pawan to ensure our teams continue to grow, innovate, and deliver exceptional value for our clients."

With over 30 years of experience in the manufacturing and technology sector, Geena brings a wealth of expertise to the role. Her proven track record in delivery excellence, customer value creation, and integrating strategic insights into HR practices will be crucial as Tata Technologies continues its journey of engineering a better world by empowering its people.

Tech Mahindra Wins the 2024 Oracle Partner Awards - EMEA Innovation Category

10 September 2024

Tech Mahindra, a leading global provider of technology consulting and digital solutions to enterprises across industries, announced it had won the 2024 Oracle Partner Awards in the Applications / SaaS EMEA Innovation Category. This award highlights partners that produced thought-leadership-level solutions that empower Oracle customers to meet their business goals and challenges through the partner's innovative solution. Partners considered for this award have developed solutions that integrate multiple Oracle technologies and products and have integrated a third-party Oracle technology partner into their solution.

The recognition underscores Tech Mahindra's commitment to delivering advanced solutions that empower customers across the EMEA region to meet their evolving business challenges and goals through innovative technology integration. Tech Mahindra has demonstrated its capacity to produce leading innovations that provide value to customers. Actively involved in several Oracle-based initiatives, Tech Mahindra has concentrated its efforts on creating cloud-native applications, developing AI-driven customer experience platforms, enhancing machine learning capabilities, and implementing advanced data analytics solutions.

Sahil Dhawan, Global Head - Enterprise Applications, Tech Mahindra, said, "We are pleased to receive the Oracle Partner Award 2024 in the EMEA Innovation category. For more than two decades, Tech Mahindra and Oracle have delivered innovation and next-gen solutions to help our customers maximize value in their information systems. We look forward to continuing our

collaboration with Oracle, expanding joint capabilities, and unlocking new opportunities for customers to Scale at Speed™ across the EMEA region and beyond.”

Tecsys Expands Board of Directors with the Appointments of Stephany Verstraete and Sripriya Thinagar

10 September 2024

Tecsys Inc., a leading provider of supply chain management software, is pleased to announce the appointment of Stephany Verstraete and Sripriya Thinagar to its Board of Directors, effective September 5, 2024. This strategic move reflects Tecsys’ commitment to strengthening its leadership team and enhancing its governance as the company continues to drive innovation in the supply chain sector.

Verstraete is a distinguished technology and digital healthcare executive with over two decades of experience scaling businesses and leading transformative change in highly competitive environments. Her career includes significant roles at Teladoc Health, Expedia and PepsiCo, where she has driven remarkable results across multinational teams. She has a strong background in mergers and acquisitions, brand building and cross-channel marketing. Her passion for leveraging data and advanced technologies to deliver innovative experiences and create behavioral change has been a key factor in her success.

Thinagar brings over 25 years of experience in technology and operational excellence, having held senior executive roles at Olo, Manhattan Associates and Bank of America. She has a background in leading global teams across product, platform and data engineering, with experience managing complex products across diverse sectors. Her insights into the competitive landscape of supply chain management, together with her deep understanding of a SaaS technology infrastructure, will help Tecsys continue to navigate an evolving industry and enhance its operational capabilities.

“We are delighted to welcome Stephany and Sripriya to our Board of Directors,” said Dave Brereton, executive chairman of the Board. “Their diverse expertise and forward-thinking perspectives will greatly contribute to our mission and help us achieve our long-term goals. We are excited about the impact they will make on our organization.”

Unilever and Accenture Join Forces to Establish a New Industry Standard in Generative AI-Powered Productivity

5 September 2024

Accenture has expanded its strategic partnership with Unilever to simplify its digital core and apply generative AI to drive efficiencies and improved business agility.

Announcing this multi-year program, Unilever will work with Accenture to establish the foundation on which to set a new industry standard in gen-AI powered productivity. This includes scaling use cases that have shown to be effective in delivering cost reductions and operational efficiencies across the business globally.

Hein Schumacher CEO, Unilever, said, “We have already introduced 500 AI applications across Unilever, helping us to reach new levels of efficiency. But as AI matures and becomes increasingly intelligent and intuitive, we see so much more potential. Now, as part of our action plan to deliver faster growth, drive productivity, and dial up performance, we’re going deeper. With the help of Accenture’s world-class tools and capabilities, we will be able to analyze where and how AI can have the highest transformational impact and deliver the greatest returns.”

Unilever will look to leverage Accenture’s GenWizard platform to accelerate their technology and digital product development. The gen AI platform has more than 350 patents and ready-to-apply tools and frameworks that work together to provide a comprehensive solution for any given technology business objective.

Julie Sweet, chair and CEO, Accenture, said, “This next exciting chapter in our decades-long collaboration with Unilever will raise the bar on how enterprises can scale gen AI to power productivity and value at speed. Accenture’s GenWizard platform will enable Unilever to create a full spectrum of targeted gen AI solutions across its business that can realize efficiencies and cost savings, uncover new ways of working and ultimately help drive competitive advantage.”

This collaboration builds on the previously announced effort to explore applications to scale gen AI across Unilever’s business operations. Since then, Unilever has focused efforts on identifying and testing new AI concepts, designs and projects from its “Horizon3 Labs.”

Event News

Cyncly brings its market-leading solutions for window, door and glass businesses to GlassBuild America

11 September 2024

Cyncly, a leading global provider of software and content solutions that help make amazing spaces for living, will be bringing its portfolio of end-to-end software solutions contractERP, FeneVision, and Soft Tech V6 to GlassBuild America in Dallas, TX, September 30 – October 2. At Booth #45025, visitors can see how Cyncly’s software can help them streamline their operations and scale their business.

Leading window and door manufacturers and glass fabricators use FeneVision ERP software to manage, view and analyze all areas of their operations. The new integration with One Click Contractor provides a pre-built integration that simplifies every step of the sales journey, from initial estimates to creating production orders. This brings manufacturers closer to the retail process and helps deliver a great consumer experience.

“Last year was the first GlassBuild America in which contractERP, FeneVision, and Soft Tech V6 were represented under the Cyncly brand. I’m excited that we’re back this year with an opportunity to show attendees how our customer-centric investments are bringing new innovations to the market,” said Don Busiek, General Manager, Windows, Doors and Glass solutions. “GlassBuild is the perfect place to hear from the industry and demonstrate the ways we can help every customer grow.”

Many companies in the industry find it challenging to scale production and respond quickly to demand for customized products. Cyncly's portfolio of industry-specific CPQ, MES, and ERP solutions helps window, door and glass manufacturers take full advantage of integration and automation, with data-driven capabilities that help them manage customer requests faster and improve overall operating efficiency.

FeneVision: Storefront Designer and greater on-time production

FeneVision, developed by manufacturing engineers, is the premier ERP solution for window, door and flat glass fabricators to design, manufacture and install products more efficiently. The software covers all essential business and production processes, from order management to production planning and delivery. Manufacturers use FeneVision to optimize material usage and production processes and enable real-time monitoring of workflows, which allows orders to flow automatically through the entire production process right up to delivery, without the need for additional manual input. Built with a modular structure, FeneVision can be flexibly adapted to specific customer needs.

Cyncly is featuring FeneVision Storefront Designer, which makes it easier for manufacturers to design complex storefronts. This module is fully integrated into the FeneVision ERP environment and allows the designs to be used directly for pricing, capacity planning, production, and shipment. The tool supports various glass elements such as Mono, Insulating Glass Unit (IGU) and Lami IGUs, and is suitable for ordering processes for shop windows and interior partitions. It automatically creates CAD drawings and sets the prices for the units.

FeneVision also addresses material delivery delays, a significant challenge facing nearly every manufacturer. Now, customers can manage multiple expected dates within a single purchase order after it's partially received and track on-time delivery ratings based on original committed date or current committed date within FeneVision, enabling users to improve production efficiency and customer satisfaction.

contractERP: A powerful cloud-based ERP

contractERP is specifically designed for the window, door, and construction supply industries. Built on the robust Microsoft Business Central platform, contractERP streamlines every aspect of your business, from contract management to field service, enabling you to scale with confidence and efficiency. Unmatched integration with leading detailing software ensures smooth workflows from estimation to production. Advanced contract management reduces errors and improves profitability. And field service management tools empower service teams to manage installations, repairs, and maintenance efficiently every time.

Soft Tech V6: Easily handle the most complex configurations

V6's powerful modules streamline manufacturing processes from quoting to production, helping businesses. Customers can choose between cloud or on-premises deployment for flexibility and control. The V6 Dealer Module exposes window and door configurations to each business's dealer network, accelerating the Configure, Price, Quote process with precision and ease. The Automation Module seamlessly connects CNC, milling, and saw machines across the floor, eliminating errors and reducing waste. And the Drawing Module enables manufacturers

to produce detailed shop drawings quickly and easily, without the need for CAD licenses or specialized skills.

Cyncly is also hosting a special Event on the first day of the conference. To learn more about the company's vision for the future of the glass and fenestration industry, join the Cyncly team for an in-booth party Monday, September 30 from 3-5 PM.

Digital transformation for the glass industry: Cyncly presents new solutions at glasstec 2024

5 September 2024

Cyncly, a leading global provider of software and content solutions that help make amazing spaces for living, is excited to present innovative software solutions for the glass industry at this year's glasstec event in Düsseldorf, October 22-25, in hall 14, stand A32. The focus this year is on the FeneVision ERP system and its latest module: The FeneVision Storefront Designer, which makes it easier than ever for manufacturers to design complex store fronts.

The glass industry is currently facing a variety of challenges, including volatile raw material markets, supply chain issues and increasing pressure to implement more sustainable production processes. These developments make it essential for companies to make their manufacturing processes more efficient and transparent in order to remain competitive. Cyncly is helping its customers rise to the challenge with innovative software solutions tailored specifically to the needs of the glass, window and door industry.

"Glasstec is always an exciting event to learn from our customers and share our new solutions," said Horst Mertes, Vice President Sales at Cyncly. "We'll be sharing updates to FeneVision that help manufacturers operate more effectively and reach consumers through online storefronts, innovations that should make this an especially productive event."

A key topic at this year's trade fair is the ongoing digitalization in the glass industry. Against the backdrop of current discussions about the need for end-to-end digital processes that increase both efficiency and the resilience of companies, Cyncly will show how modern ERP and MES systems can optimize production processes and mitigate supply chain disruptions.

The focus of the event is FeneVision, a specialized software solution aimed at manufacturers of windows, doors and glass products. Developed by manufacturing engineers, FeneVision helps flat glass fabricators to design, manufacture and install products more efficiently. The ERP software covers all essential business and production processes, from order management to production planning and delivery. Its modules optimize material usage and production processes and enable real-time monitoring of workflows. This allows orders to flow automatically through the entire production process right up to delivery, without the need for additional manual input. Thanks to its modular structure, FeneVision can be flexibly adapted to specific needs, resulting in optimized production processes and efficient use of resources.

Designing storefronts: Cyncly presents personalized designer

A particular highlight is the new FeneVision Storefront Designer, which makes it easier for manufacturers to design complex store fronts. This module is fully integrated into the

FeneVision ERP environment and allows the designs to be used directly for pricing, capacity planning, production, and shipment. The tool supports various glass elements such as Mono, Insulating Glass Unit (IGU) and Lami IGUs and is suitable for ordering processes for shop windows and interior partitions. It automatically creates CAD drawings and sets the prices for the units.

Extended functionalities in response to market changes

Cyncl's updates to FeneVision address a significant challenge faced by manufacturers dealing with material delivery delays. Managing multiple expected dates within a single purchase order and tracking on-time delivery ratings within FeneVision enables users to improve production efficiency and customer satisfaction.

- **Multiple expected dates per purchase order:** This feature allows manufacturers to manage partial deliveries more effectively. By setting different expected dates at the line-item level, users can better plan and coordinate production schedules, even when material deliveries change after a partial receipt.
- **Tracking on-time delivery ratings:** FeneVision now tracks performance against both the initial committed delivery date and any re-agreed dates. This helps users monitor and manage customer expectations more accurately, and provides valuable insights for improving customer relationships and internal processes.

Overall, these enhancements can help mitigate the chaos caused by delivery delays and improve both production planning and customer service.

HCLTech to showcase advance engineering and AI solutions at SEMICON India

10 September 2024

HCLTech, a leading global technology company, will showcase a comprehensive suite of enterprise, digital and engineering innovations specifically designed for the semiconductor ecosystem at SEMICON India from September 11-13.

HCLTech suite of solutions on showcase will include conversational AI, HCLTech AI Force - a generative AI solution that accelerates software development lifecycle, Digital Twins for Wafer Handler and Rack System, Spec to Parts and Spec to Platform and HCLTech Proto ATMP lab demos.

"We look forward to our participation in SEMICON India – especially at a time when India is poised to become a leading player in the semiconductor space. We're happy to contribute our skills, knowledge and engineering prowess gained over four decades," stated Ameer Saithu, EVP, Semiconductor, HCLTech. "Our collaborations with top OEMs, fabs and OSATs demonstrate our commitment to accelerating semiconductor roadmaps, maximizing ROI and fostering innovation. At HCLTech, we are dedicated to transforming the semiconductor ecosystem and driving progress for our clients."

With over 25 years of experience in this field, HCLTech is a recognized leader in Semiconductor Engineering Services and proudly partners with six of the top 10 semiconductor OEMs globally.

Leveraging extensive expertise in semiconductor chip and equipment development, HCLTech is uniquely equipped to meet the dynamic demands of the industry. As an approved design partner for leading foundries, HCLTech delivers cutting-edge silicon services to globally prominent IDMs and fabless chip companies, underpinned by strategic investments in laboratories and delivery centers around the world.

HCLTech offers several key services including Mechanical and Manufacturing Engineering, Electrical Engineering, Software and Digital Engineering, Product Testing, Supply Chain Management Support and Lifecycle Services.

IMAGINiT Technologies Highlights Solutions that Support the Future of Manufacturing at the International Manufacturing Technology Show 2024

11 September 2024

IMAGINiT Technologies is exhibiting at the International Manufacturing Technology Show (IMTS) 2024 in Chicago, Illinois taking place September 9-14, 2024 at McCormick Place. IMAGINiT will share insights on how manufacturers can digitally transform their operations and processes to save time, increase collaboration, and reduce costs.

“Our team of experts offer manufacturers a unique perspective when it comes to navigating their digital transformation journey,” said Jason Barnett, vice president, manufacturing and product lifecycle management at IMAGINiT Technologies. “Having worked with many large manufacturers, we can share successful examples of how companies have elevated their business through the digital transformation of their manufacturing processes. We can make recommendations on when and where it makes sense to leverage AI and automate tool paths, how to build better systems to handle data and machine outputs, and how to integrate business systems and technology to create more efficient processes.”

Attendees are encouraged to visit IMAGINiT’s booth in the East Building, Level 3 – Booth #134064 where they can:

- Engage with technical experts who will discuss how process changes and tools such as Autodesk Fusion can help reduce errors, improve precision, and shorten production cycles by automating complex tasks such as generating tool paths for machining.
- Speak with business leaders about how embracing digital solutions in your manufacturing processes through the use of leading technology and automation, contributes to attracting and retaining top talent.

IMAGINiT partners with companies such as Autodesk, Eagle Point, and Leica Geosystems to provide customers with tailored solutions that help them achieve their unique business goals. As the manufacturing landscape continues to evolve, IMAGINiT provides innovative and scalable solutions designed to meet the changing needs of the industry.

For more information, visit IMAGINiT Technologies at IMTS 2024, East Building, Level 3 – Booth #134064.

Stratasys Demonstrating at IMTS How Today's Manufacturers use Additive Manufacturing Across the Production Cycle, Improving Both Business and Part Performance

5 September 2024

Stratasys Ltd., announced it is participating in the upcoming International Manufacturing Technology Show (IMTS) with the launch of a new technologically advanced printer, keynote address and dynamic booth presence showcasing a championship IndyCar race car produced in part with Stratasys technologies.

Stratasys will unveil its new Origin® Two photopolymer printer on Monday, September 9th at 2:30 p.m., Central Time at Stratasys booth, #433007 in the West Hall on Level 3. The new Origin Two printer addresses customers' need for precision, repeatability, and unmatched surface finish in highly specialized, limited-run manufacturing applications. This new solution complements the company's primary focus on additive manufacturing at scale, highlighting the flexibility and scalability of additive manufacturing across all phases and all levels of part complexity in the production cycle.

Rich Garrity, Stratasys Chief Industrial Business Officer, will deliver a keynote address at 2 p.m. on September 10th focusing on how additive manufacturing is delivering value for manufacturers with solutions that provide unique advantages. Garrity will be joined by representatives from St. Cloud State University (SCSU) to discuss how the two organizations are working together to build the skilled workforce necessary to take manufacturing to the next level. Assistant Professor, Mark Schroll, Technology Education, SCSU and Trevor Hornsby, a senior in the Mechanical Engineering program at SCSU will join Garrity on the stage.

Stratasys will also display solutions based on all five of its industry-leading technologies, including the F3300™ high-scale manufacturing printer and the Neo® 800 stereolithography printer, along with materials and software. Also in the booth, Stratasys partner, Andretti Global Racing, will feature one of its IndyCar's that is running in this season's IndyCar circuit, demonstrating how additive manufacturing has been a difference maker in building championship cars.

"IMTS gives us the opportunity to showcase our latest innovations, our strong partnerships and how we contribute to the overall manufacturing industry," said Garrity. "Beyond our focus on technology, this year we will also demonstrate our commitment to developing the skilled workforce needed to leverage these technological advances across our industry. Highlighting education and training further demonstrates our commitment to empowering the next generation of manufacturing professionals and ensures they have the expertise to thrive in our rapidly evolving industry."

The IMTS show runs September 9 to September 14 at the McCormick Place Convention Center in Chicago, IL.

Speaking sessions featuring Stratasys experts include (All times Central US):

- **September 10, 2 p.m.:** Rich Garrity, Chief Industrial Business Officer – Mainstage
Keynote: Executive perspective of additive’s role in manufacturing; focus on education and the next generation of skilled workers.
- **September 11, 9 a.m.:** Michal Diga, P3 Origin Product Director, Stratasys – Additive Manufacturing for Production: Why Repeatability Matters, and How to Get There. Room W-192A.
- **September 11, 12:30 p.m.:** Jesse Roitenberg, Director, Education Segment, Stratasys – Investing in the Future Through Programs and Scholarships. SMARTForce Amphitheater.

Financial News

Accenture to Announce Fourth-Quarter and Full-Year Fiscal 2024 Results

10 September 2024

Accenture will host a conference call at 8:00 a.m. EDT on Thursday, Sept. 26, 2024 to discuss its fourth-quarter and full-year fiscal 2024 financial results. An earnings news release will be issued before the call.

To participate in the teleconference, please dial +1 (877) 692-8955 [+1 (234) 720-6979 outside the U.S., Puerto Rico and Canada] and enter access code 5504138 approximately 15 minutes before the scheduled start of the call. The conference call will also be accessible live via webcast on the Investor Relations section of the Accenture website at www.accenture.com.

A replay of the conference call will be available at www.accenture.com and at +1 (866) 207-1041 [+1 (402) 970-0847 outside the U.S., Puerto Rico and Canada] with access code 9225580, from 11:00 a.m. EDT on Thursday, Sept. 26, 2024 through Wednesday, Dec. 18, 2024.

Blackline Safety Reports Record Quarterly Revenue of \$33.7M up 36% Year-Over-Year and Positive EBITDA in Fiscal Third Quarter

11 September 2024

Blackline Safety Corp. (“Blackline”, the “Company”, “we” or “our”), a global leader in connected safety technology, reported its fiscal third quarter financial results for the period ended July 31, 2024.

Management Commentary

Blackline Safety achieved another record quarter for revenue at \$33.7 million, an increase of 36% from last year. This is the 30th consecutive quarter of year-over-year growth dating back 7.5 years. “We have achieved topline growth in every quarter since we launched the G7. The \$33.7 million reported this quarter is actually more revenue than we generated in the entire fiscal 2019, demonstrating the strong market acceptance of our connected worker solutions,” said Cody Slater, Blackline Safety Corp. CEO and Chair.

“Topline growth has been the story all along for Blackline but achieving positive EBITDA demonstrates that the Company is now truly reaching scale, and we have barely scratched the surface of what we can accomplish,” Slater continued.

Gross profit increased 48% to \$19.9 million and gross margins improved to 59% from 54% last year. “Gross profit for the year to date is nearly equal to that of the entire 2023 year with our single strongest quarter still to come,” Slater added.

“ARR is at a record level of \$62.1 million, up 32% year-over-year, demonstrating the power of our recurring revenue model. NDR for the quarter was 128%, up from 125% twelve months ago, which reflects our existing customers continuing to expand their current contracts,” noted Slater.

Third quarter total expenses as a percentage of revenue⁽¹⁾ declined to 65% compared to 81% from the prior year’s quarter and 132% from the third quarter of 2022. “This dramatic improvement demonstrates the cost discipline the whole Company has shown with every expense category reduced as a percentage of revenue,” commented Slater.

Demand for Blackline’s industry-leading connected safety products and services led to strong revenue growth in every geography, with the U.S. up 34% year-over-year, Europe up 29%, Canada up 11% and the Rest of World (“ROW”) region growing an impressive 212%. Blackline continues to expand its presence globally with customers in over 75 countries around the world. The continued success of this expansion is evidenced by the recent announcement of a new energy client in South Africa, marking the Company’s first significant contract in Africa.

“The Blackline platform has become an invaluable tool for all our customers to protect their workers. An example of this is our recently announced \$3.9 million contract renewal with one of the largest utility companies in the United States, adding two more years of monitoring by Blackline’s Safety Operations Center (SOC) as well as push-to-talk services for the utility company’s 2,200 G7 devices,” noted Slater.

During the quarter, the Company closed a bought deal financing and concurrent private placement for gross proceeds of \$34.6 million. Blackline ended the third quarter with total cash and cash equivalents including short term investments of \$40.8 million. The Company also has \$14.8 million available on its senior secured operating facility with a \$5.0 million accordion.

“The Company continues on its path towards cash flow positivity – we have seen net cash used in operations decrease from \$20.1M during the first nine months of 2023 to just \$2.9M in the same period in 2024. As this trend continues, we expect to see the Company reach another milestone and achieve cash flow positivity in the near future,” stated Slater.

“In Q3 2024, Blackline demonstrated strength in all aspects of the business, reaching the milestone of positive EBITDA and advancing us on our path to a Rule of 40(3) company, the gold standard for SaaS businesses. Only two years ago, we were at negative 16 according to this metric—this quarter we reached 38 with our seasonally strongest quarter still ahead of us,” concluded Slater.

Fiscal Third Quarter 2024 and Recent Financial and Operational Highlights

- Total revenue of \$33.7 million, a 36% increase over the prior year's Q3
- Service revenue of \$18.2 million, a 34% increase over the prior year's Q3
- Product revenue of \$15.5 million, a 38% increase over the prior year's Q3
- ARR(1) of \$62.1 million, a 32% increase over the prior year's Q3
- United States revenue growth of 34% over the prior year's Q3
- European revenue growth of 29% over the prior year's Q3
- Canadian revenue growth of 11% over the prior year's Q3
- ROW revenue growth of 212% over the prior year's Q3
- Achieved product gross margin of 38%, up from 29% from the prior year's Q3
- Achieved service gross margin of 77%, up from 75% from the prior year's Q3
- Total Q3 expenses of \$21.9 million, up \$1.8 million from the prior year's Q3
- Total expenses as a percentage of revenue(1) declined in Q3 2024 to 65% compared to 81% from the prior year's Q3
- Generated gross proceeds of \$34.6 million through a bought deal financing and concurrent private placement
- \$3.9 million contract renewal with one of the largest utility companies in the U.S.
- \$1.5 million deal with a California utility provider
- \$1.9 million deal with a South African energy company
- \$8.5 million contract expansion for a major North American midstream company to protect an additional 1,025 workers

(1) This news release presents certain non-GAAP and supplementary financial measures, including key performance indicators used by management and typically used by companies in the software-as-a-service industry, as well as non-GAAP ratios to assist readers in understanding the Company's performance. Further details on these measures and ratios are included in the "Key Performance Indicators," and "Non-GAAP and Supplementary Financial Measures" sections of this news release.

(2) Hardware margins were the highest in the Company's history after Q4 2020 is adjusted to exclude COVID relief programs.

(3) Rule of 40 is calculated as the sum of revenue growth and Adjusted EBITDA margin.

Key Financial Information

Total revenue increased 36% to \$33.7 million in fiscal third quarter. Geographically, revenue was up in each region with the U.S. representing the largest contributor with \$15.8 million, up 34% year over year. The European region increased revenue by 29% to \$7.9 million, Canada grew by 11% to \$6.4 million and the ROW region grew by 212% to \$3.7 million. Revenue from ROW in Q3 2024 was greater than its contribution in the entire fiscal 2021.

Product revenue grew by 38% in the third quarter to \$15.5 million. This strong growth was made possible by the Company's expanded sales network and past investments in our global sales team, especially within Europe and the ROW markets.

Software service revenue during the fiscal third quarter was up 34% to \$18.2 million compared to the prior year's Q3 and was up 9% relative to last quarter. This quarter-over-quarter growth represents an acceleration compared to the 5% growth from Q4 2023 to Q1 2024 and the 5% growth from Q1 2024 to Q2 2024. This quarter's growth was the result of new activations from devices sold to end users as well as the strong rental revenue which grew 101% to \$2.3 million from Q3 last year.

Gross margin percentage(1) for the third quarter was a record 59% compared to 54% in the prior year's quarter. The improvement in gross margin percentage was aided by our highest ever product gross margin percentage(1) of 38% this quarter, up from 34% in Q3 2023 and more than double the product gross margin percentage(1) achieved two years ago. Service gross margin percentage(1) improved to 77% from 75% last year in Q3.

Total expenses were \$21.9 million, up 9% from last year. Total expenses as a percentage of revenue(1) were 65% - a significant improvement from last year which was 81% of revenue.

Net loss for the quarter was \$2.5 million, down from a loss of \$6.8 million in the prior year's third quarter. On a per share basis, net loss was \$0.03 compared with a loss of \$0.09 last year. The net loss was one-third of where it was a year ago due to higher revenue and stronger gross margins.

EBITDA(1) for the third quarter was \$53 thousand compared to a loss of \$4.9 million in the prior year's third quarter. On an adjusted basis, EBITDA was \$0.8 million, an improvement of \$4.6 million relative to the Adjusted EBITDA(1) loss of \$3.8 million last year.

As of July 31, 2024, Blackline had \$13.8 million in cash and cash equivalents along with \$27.0 million in short-term investments. The Company has \$14.8 million available on its senior secured operating facility and \$47.5 million available on its lease securitization facility. Cash and cash equivalents increased \$0.6 million during the third quarter through a combination of \$30.2 million increase from financing activities, a decline of \$29.9 million in investing (primarily from \$27.0 million invested in short-term investments) and a decline of \$0.9 million from operating activities.

Blackline's Interim Condensed Consolidated Financial Statements and Management's Discussion and Analysis on Financial Condition and Results of Operations for the three and nine-months ended July 31, 2024, are available on SEDAR+ under the Company's profile at www.sedarplus.ca. All results are reported in Canadian dollars.

Conference Call

A conference call and live webcast have been scheduled for 11:00 am ET on Wednesday, September 11, 2024. Participants should dial 1-844-763-8274 or +1-647-484-8814 at least 10 minutes prior to the conference time. A live webcast will also be available at <https://www.gowebcasting.com/13632>. Participants should join the webcast at least 10

minutes prior to the start time to register and install any necessary software. A replay will be available after 2:00 PM ET on September 11, 2024 through October 11, 2024 by dialing +1-855-669-9658 (Canada Toll Free), +1-877-344-7529 (USA Toll Free) or +1-412-317-0088 (International Toll) and entering access code 9016403.

Implementation Investments

Beso Lux Group to Boost Growth & Fuel Innovation with Centric PLM

10 September 2024

Centric Software® is pleased to announce that Beso Lux Group, and its largest brand, Micadoni, have selected Centric PLM™ to track project performance and propel growth. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source, buy, make, price, allocate, sell and replenish products such as fashion, outdoor, luxury, multi-category retail, grocery, food & beverage, cosmetics & personal care and consumer electronics to achieve strategic and operational digital transformation goals.

Beso Lux Group was founded in 2015 in Luxembourg with the vision of revolutionizing furniture access. Today the Group is recognized as a leading creator of interior brands and has introduced the 'one click to furniture world' concept, aiming to offer the most sought-after and recognizable furniture collections online, accessible to everyone, anywhere. Beso Lux Group operates across 15+ countries and partners with stores, showrooms, architects, interior designers, e-commerce platforms, real estate developers, hotels and private clients and has a portfolio of 8 hugely successful brands.

Micadoni, a modern furniture brand renowned for delivering trendy and stylish interiors, is a powerhouse of innovation and unparalleled quality. Our goal is to provide attainable luxury and attractive practicality for everyone's taste. We use high-quality materials in the construction of our collection pieces, ensuring that every piece not only looks great but is also durable and long-lasting. We create nearly 10 to 15 new sofa designs per month, while the furniture industry practice is on average between five to 10 new styles per year.

"We are constantly offering new furniture creations to our customers," says Cyrille Arduino, COO at Micadoni. "We stay ahead of all the latest trends and are committed to producing products our customers will love. I would say that more than 30% of the company is focused on research and development."

Rapid growth of its team, customer base and product portfolio, along with company-wide goals to standardize processes and technologies, set Micadoni on a PLM search early in 2024.

"We are continuously innovating with new product lines and designs," explains Cyrille. "Due to the dynamic growth of Beso Lux Group and the concurrent management of a wide array of projects, we have reached the limits of spreadsheet efficiency for handling large volumes of information. While spreadsheets remain useful tools, the complexity and scale of our operations necessitate more advanced solutions."

Micadoni's PLM goals are to improve product and project management, have access to real-time data and reports and adopt a tech-driven approach to propel sustainable growth.

"We require a tool that can effectively monitor our day-to-day activities and provide the management team with a comprehensive overview of each department's operations," elaborates Cyrille. "Another significant advantage of a PLM system is, it gives the ability to identify bottlenecks in the development process and provide insights on where to allocate additional resources effectively."

After assessing several solutions, Micadoni selected Centric SMB, the cloud-based PLM solution specifically designed for small and mid-sized businesses. They based their decision on recommendations from industry peers, Centric's impressive reputation and PLM's stand-out functionality.

"We like that Centric PLM is cloud-based and that we can configure the system for our specific needs and workflows," shares Przemysław Jurek, CIO at Micadoni. "We conducted highly beneficial workshops with Centric, leaving us confident that their solution would add substantial value to our existing operations."

Micadoni has great expectations of its future partnership with Centric Software and expects all teams across the business to benefit from the PLM implementation.

"We anticipate a strong and enduring relationship with Centric for many years to come," says Cyrille. "What gets measured gets done. Our first step is to analyze department workloads and identify areas for improvement. We look forward to collaborating with the Centric team to ensure mutual success."

"We are delighted to partner with Beso Lux Group and Micadoni to drive their growth and passion for product innovation," says Fabrice Canonge, President of Centric Software. "Centric PLM will empower teams across the company to work more efficiently and continue to create trend-setting, high quality products."

Betaversity Teams Up with EON Reality, Empowered by EON Future Workforce Grant for XR and AI Advancements

10 September 2024

EON Reality, the world leader in AI-assisted Virtual Reality and Augmented Reality-based knowledge transfer for industry and education, is proud to announce a partnership with Louisiana-based Betaversity, LLC. Bolstered by the EON Future Workforce Grant, Betaversity is set to integrate the EON-XR and EON-AI platforms into its strategy to build an accreditation ecosystem that equips learners with industry-relevant certifications and futuristic skills.

Betaversity is an innovative educational software and consulting firm committed to improving learning outcomes and employment readiness. This collaboration with EON Reality demonstrates a shared commitment to developing the skills necessary for the constantly evolving landscape of work.

Andrew Schwarz, co-founder of Betaversity, emphasizes the impact of the partnership: “Joining forces with EON Reality supports our mission to deliver state-of-the-art educational opportunities. With the EON Future Workforce Grant, we are excited to leverage the most advanced XR and AI technologies to cultivate an environment where learners can thrive in acquiring future-proof skills.”

Betaversity has an ambitious vision to create an ecosystem where industry-based certifications are not just teaching tools but career-building pathways. EON Reality’s comprehensive platforms will play a vital role in fulfilling this vision, ensuring training is not just an educational experience, but a transformative one, paving the way for meaningful careers in the future workforce.

Mats W. Johansson, President of EON Reality, shares his vision for the collaborative journey ahead: “Through this exciting new partnership with Betaversity, we are set to redefine how learners and the broader workforce gain the skills for tomorrow’s challenges. Our EON-XR and EON-AI platforms are crucial in creating immersive, interactive learning experiences that lead to real-world success.”

As both organizations move forward with their intent to mold a workforce that is ready, resilient, and adaptive, Betaversity is poised to play an integral role in advancing how learners prepare for and succeed in the future work ecosystem.

BWXT Nuclear Operations Group (NOG) Selects iBase-t’s Solumina as Corporate Standard for Manufacturing Operations Digital Transformation

11 September 2024

iBase-t, the global leader in manufacturing cloud software for the Aerospace and Defense industry, today announced that BWXT Nuclear Operations Group, Inc. (BWXT) has selected iBase-t’s Solumina Manufacturing Operations platform to accelerate its digital transformation efforts in manufacturing operations and sustainment, including enabling BWXT’s model-based engineering needs.

Solumina’s microservices-based open architecture and cloud-native technology is the industry’s first manufacturing operations platform to support Model-based Engineering (MBE) requirements on the shop floor and sustainment depot. Solumina MBE is designed to enable BWXT to improve operational efficiency by extending engineering data to speed up modifications in manufacturing production and sustainment processes while sustaining quality controls.

BWXT will deploy iSeries across several of its specialized facilities. These facilities are integral to BWXT’s manufacture of naval nuclear reactors for U.S. submarines and aircraft carriers.

“iBase-t’s Solumina iSeries will play a vital role in elevating our digital innovation in engineering, production and sustainment,” said Kurt Bender, director of information technology for BWXT.

Chris Rhodes, director of technology and improvements for BWXT added, “This partnership with iBase-t is intended to improve efficiency throughout our operations, allowing us to deliver

quality components to our customers more quickly and cost-effectively, while sustaining quality controls.”

“As iBase-t expands our leadership in military and defense on a global scale, our engagement with BWXT will underscore our ability to accelerate model-based manufacturing strategies, enabling our customers to meet the demand for naval nuclear reactors while reducing operational costs,” said Naveen Poonian, CEO of iBase-t. “We’re proud to be a trusted advisor, supporting a long-term deployment strategy of Solumina across BWXT.”

BWXT’s facilities are equipped with advanced machining and welding work cells capable of full-scope work to prototype design and final production. The deployment of Solumina will further enhance BWXT’s capabilities in manufacturing reactors for U.S. Navy submarines and aircraft carriers.

Clayton Lays the Foundation for Future Growth and Innovation with Oracle Fusion Cloud Applications Suite

10 September 2024

Clayton, a leading national builder of single-family attainable housing, is leveraging Oracle Fusion Cloud Applications Suite to streamline business processes and support its mission to provide attainable, sustainably-built housing to individuals and families across America. With an integrated suite of cloud applications to manage finance, planning, and supply chain processes, Clayton has increased efficiency, reduced costs, and enhanced decision-making as it serves its customers across the country.

Founded in 1956, Clayton has grown to become one of the nation’s leading home builders, with more than 60 home building and component manufacturing facilities, over 380 company sales locations, and a product portfolio that includes a comprehensive range of modern manufactured and site-built housing. With a vertically integrated business model that includes home building, retail, and financing business units, Clayton’s complex operations made it difficult for leadership to gain timely insights and slowed decision-making. Clayton needed a unified business platform that could streamline complex finance and accounting processes, improve operational visibility, and support its dynamic supply and demand planning needs. After careful consideration, Clayton consolidated its finance, planning, and supply chain processes on Oracle Fusion Applications.

“The housing industry has endured numerous headwinds recently with rising interest rates and material inflation. Now, more than ever, we need to stay focused on enterprise-wide productivity, improvements, cost reduction, and driving value for our customers,” said Jim Stariha, chief financial officer, Clayton. “Oracle Fusion Applications Suite has enabled us to standardize intricate finance and supply chain processes on a single integrated cloud platform and take advantage of advanced capabilities to reduce working capital, increase productivity, expand insights, and improve decision-making as we make home building more sustainable and homeownership more attainable.”

With Oracle Fusion Cloud Enterprise Resource Planning (ERP), Clayton has been able to increase efficiency and insights, reduce costs, and improve financial controls by consolidating financial data from its business units into a single chart of accounts and general ledger. Oracle Fusion Cloud Enterprise Performance Management (EPM) has helped Clayton further streamline planning, budgeting, and reporting to accelerate its financial close process. In addition, Oracle Fusion Cloud Supply Chain & Manufacturing (SCM) has helped Clayton improve supply and demand planning and increase the efficiency of home building and logistics operations so it can quickly respond to changing market conditions.

“To stay competitive in the housing market, Clayton needed to consolidate systems, streamline processes, and embrace automation,” said Steve Miranda, executive vice president of applications development, Oracle. “With Oracle Fusion Applications, Clayton can take advantage of an integrated applications suite with embedded AI to help improve the speed and accuracy of processes, increase overall efficiency, and bring new housing innovations to market that help make homeownership a reality for more people in America.”

Oracle Fusion Applications Suite enables organizations to take advantage of the cloud and the latest advancements in AI to break down organizational silos, standardize processes, and manage finance, HR, supply chain, and customer experience data on a single integrated cloud platform. With quarterly update cycles, it gives customers access to continuous innovation as new features are added every 90 days.

elxis expands service offering with CONTACT Elements for IoT

11 September 2024

elxis AG is implementing digital services with CONTACT Elements for IoT. The company, whose portfolio includes strip guiding solutions and quality assurance systems, now benefits from company-wide end-to-end data.

Since 2019, elxis has been using CONTACT Software’s CIM Database PLM to ensure efficient development processes. Now, the company is introducing CONTACT Elements for IoT as a comprehensive platform for asset management and digital services. With the IoT platform, elxis is creating a portal that enables direct exchange with customers and optimizes service processes. It provides access to all asset-related data. Customers can find relevant information about the products they use, as well as order spare parts and services. Service teams use Elements for IoT in their daily work to handle service orders efficiently.

Thanks to CONTACT’s standardized solution, elxis avoids information silos and media breaks throughout its company-wide processes. The single source of truth makes all data available to various disciplines and departments, from development to production. “Not only do our service teams work more efficiently with Elements for IoT, but we also provide our customers with an improved offering by giving them access to information about their assets and self-service options,” says Frank Menne, Vice President Global IT at elxis.

The company already uses PLM modules like Material Compliance, Project Risk Management, and Project Office for project management. With upcoming product generations, elxis plans to use Elements for IoT to evaluate live information from assets in operation, contributing to a

closed-loop process. This will enable elxis to continuously improve the performance of its machines and plants based on usage data.

elxis AG is divided into three business units: Flexible Materials, Metal, and Safety Components. More than 1,000 employees work at 20 locations worldwide. Founded in 1996 and headquartered in Wenden, Germany, elxis AG includes the subsidiaries BST GmbH and EMG Automation GmbH.

EORTC Extends Medidata Partnership to Help Power New Phase of Oncology Research

11 September 2024

Medidata, a Dassault Systèmes brand and leading provider of clinical trial solutions to the life sciences industry, and the European Organisation for Research and Treatment of Cancer (EORTC), announced a four-year extension to their partnership. The extended relationship will enable EORTC to further increase patient access to oncology clinical trials, make trial participation easier, and help to deliver new treatments to the market faster. EORTC is now leveraging 13 Medidata solutions, enabling their researchers to access and manage all clinical data in a single place and offering patients a seamless trial experience.

Vassilis Golfopoulos, headquarters director, EORTC, said, "We chose the Medidata Platform to further expand our data management and patient engagement capabilities based on our years of experience working together. This partnership will enhance our support for oncology researchers as we collaborate on innovative ways of working with clinical trial data in the future."

"This expansion benefits patients through an improved clinical trial experience, engaging with study activities on their personal mobile devices, while researchers will have the ability to make better decisions faster," said Janet Butler, executive vice president, head of global sales, Medidata. "The integration of additional solutions, including Medidata Rave CTMS and Medidata Rave eTMF, will empower EORTC researchers with higher data quality, allowing them to shorten study timelines and deliver safer oncology trials for patients."

For EORTC the expanded partnership also allows the exploration of a joint research and data collaboration with Medidata AI solutions in pursuit of improved standards of cancer care.

Fujifilm Solves Data Fragmentation and Enhances Decision-Making with Informatica's AI-Powered Master Data Management

12 September 2024

Informatica, a leader in enterprise AI-powered cloud data management, announced that FUJIFILM Holdings Corporation (FUJIFILM) has implemented Informatica's Master Data Management (MDM) solution to manage master data to unify their data strategy and drive centralized decision-making. Fujifilm chose Informatica's MDM to combine data across multiple source systems resulting from decades-long business expansion and transformations.

Starting as a photographic filmmaker in 1934, FUJIFILM embarked on a company-wide transformation in 2000 with a mission to diversify into different product lines including healthcare, material business, business innovation and imaging. Over the decades, almost 90 core systems operated across businesses, resulting in data fragmentation across the organization.

From a component-based strategy where specialized systems were developed individually for each business and department, FUJIFILM decided to optimize data management across the company by implementing a platform-based solution. This new strategy involves creating shared functions tailored to meet specific needs across the entire group. However, migrating all existing core systems, including moving data from enterprise systems and applications, and 20-plus SAP ERP systems to their new management analytics system would have been costly and time-consuming.

FUJIFILM decided to establish a unified master data strategy, leveraging Informatica's MDM and Data Quality solutions to streamline and consolidate diverse data domains, including product codes, sales, inventory and business partner data from its core systems, and centrally manage and utilize the data across different departments and company divisions at global level.

Takaharu Furusho, Senior Manager of the ICT Strategy Department at FUJIFILM Holdings Corporation, commented, "Informatica's Master Data Management solution has enabled us to visualize data generated daily from our global operations through a unified, cross-functional view. This adoption has contributed immensely to our group management's ability to use trusted data to operate more efficiently and make data-driven decisions to unlock valuable insights."

Taito Kozawa, Country Manager and President of Informatica Japan, said, "Informatica is pleased to be able to contribute to FUJIFILM's innovation and value creation by enabling the customer to establish a single view of trusted data across their entire group of businesses. Our MDM solution empowers business users and analysts to make more accurate decisions and connections by leveraging high-quality, consistent and trusted data."

In addition, the comprehensive Informatica training programs and support were a key advantage to FUJIFILM, enabling the customer's ICT employees to accelerate in-house solution developments while acquiring the relevant data management knowledge and skills. For FUJIFILM, which prioritizes development speed, the ease of making modifications and changes without coding and the ability to test the system with minimal man-hours were also key factors driving the adoption.

FUJIFILM plans to advance self-service business intelligence (BI) further, integrate artificial intelligence (AI) into management decision-making, and improve data utilization across the business while maintaining high-quality, trusted data within the organization.

Nitro Snowboards Selects Centric PLM to Unify Teams & Digitalize Value Chain

12 September 2024

Centric Software® is pleased to announce that Nitro Snowboards has selected Centric PLM™ to streamline ways of working and support future growth. Centric Software provides the most innovative enterprise solutions to plan, design, develop, source, buy, make, price, allocate, sell and replenish products such as fashion, outdoor, luxury, multi-category retail, grocery, food & beverage, cosmetics & personal care and consumer electronics to achieve strategic and operational digital transformation goals.

Nitro was founded by Sepp Ardelt and Tommy Delago in 1990 in Seattle and was fuelled by the duo's passion to make the best products for snowboarders *by* snowboarders. 34 years later it is one of the most successful and authentic brands in the industry. Nitro's headquarters and teams span the globe, it works with six factories and sells its unique snowboards, technical gear and apparel through 36 distributors worldwide. Nitro has helped grow the sport of snowboarding through its groundbreaking product development, marketing, movies, grass roots events and global team of world class snowboarders.

When Nitro embarked on a project to digitalize its entire value chain, optimize internal processes and improve communication between teams operating in different countries, the need for a PLM became evident.

"Our product teams are spread across the US, Canada, Germany, Italy and Taiwan, and that can cause significant issues," explains Rene Iven, Brand Strategy and Analytics at Nitro Snowboards. "We quickly realized we need a PLM to get everybody under one umbrella."

Nitro searched for the industry gold standard PLM solution and chose Centric's cloud-based platform for small and mid-sized businesses, Centric SMB. Superior functionality, vital scalability and an exceptional relationship with the Centric team were deciding factors.

"Besides it being a great software product, the personal care and dedication from the Centric team assured us that we are in good hands," says Iven. "This isn't typical in the industry; Centric are consistent in delivering new tools, inspiring workshops and exceptional customer service across the board."

In addition to refining internal workflows, Nitro also looks forward to onboarding its suppliers onto the system in the near future, in an effort to enhance collaboration at every stage of the product development journey.

"Transparent development is crucial for a rapidly growing company, and aligning C-level executives, product managers, designers and even our suppliers is an invaluable advantage," comments Iven. "With Centric, we can now identify any issues early on in our processes, which will allow us to take huge steps forward in terms of time-savings, reducing manpower and streamlining recurring tasks."

Nitro has a line of sight to future possibilities as Iven explains, "We are highly motivated to improve as much as possible. At the moment Centric PLM is perfectly suited to our needs, but as a company we are always looking to innovate, and we are fully open to the possibility of exploring additional Centric solutions in the future as our needs develop. We are looking forward to a long and successful relationship with Centric."

“We are thrilled that Nitro Snowboards chose Centric PLM to unify its teams and boost product development and innovation,” says Chris Groves, CEO of Centric Software. “We also look forward to a longstanding partnership with this authentic, passionate and successful brand.”

Ricoh Modernizes to the Cloud to Informatica's AI-Powered Intelligent Data Management Cloud Platform to Improve Digital Workflow Experience

12 September 2024

Informatica, a leader in enterprise AI-powered cloud data management, announced that Ricoh Company, Ltd., a leading provider of document management solutions, has chosen Informatica's Intelligent Data Management Cloud™ (IDMC) to accelerate the company's GLIDER data infrastructure project which will support the overall business transformation of Ricoh becoming a digital services company.

The GLIDER project calls for consolidation of raw data from sales, inventory and operations, from Ricoh Group operating over 50 companies globally, and establishes a system for centralized data processing and analysis at the headquarters. GLIDER aims to promote Return On Invested Capital (ROIC) management by significantly reducing the man-hours and time required to process and analyze raw data from the Group. As Ricoh moves its on-premises workloads to the cloud, the company decided to modernize from Informatica's PowerCenter on-premises environment to Informatica's AI-powered, cloud-native IDMC platform while fully reusing PowerCenter assets in the cloud, saving migration cost, time and effort. This decision followed a successful evaluation at the company's North America site.

“We have chosen to modernize our current Informatica PowerCenter solution to an AI-powered, cloud-native Informatica's IDMC because of IDMC's platform neutrality, multi-cloud support, superior functionality and performance, including the ability to accelerate the conversion of workloads from PowerCenter to IDMC in a matter of minutes while supporting seamless and timeliness of our business operations across the globe,” said Yoshinobu Hamanaka, Deputy General Manager of Process, IT and Data Management, Digital Strategy Department, Corporate IT Management Center, Ricoh Company, Ltd.

“Above all, IDMC is the global standard for our data integration and management platform because it offers an easy-to-use user interface, a low-code/no-code environment and the scalability and flexibility we need to adapt to our changing business environment. It lessens our user's daily workloads and improves productivity and operational efficiency, ensuring continuous innovation and service improvement for better digital workflow experience, as a result of empowering our IT and business users to drive trusted data from the cloud,” Mr. Hamanaka added.

With centralized data management, users have the ability to access high-quality, trustworthy data related to customer information, respond quickly to customer needs and offer customized service delivery. Additionally, IDMC's reliability and global support enable the company to offer consistent services and improve customer satisfaction. The users can manage and process data more efficiently and flexibly, and increase the speed and efficiency of their operations.

Taito Kozawa, Country Manager and President of Informatica Japan, commented, “Informatica Japan is pleased to support Ricoh in their data integration project, enabling the customer to drive data transformation at a global scale to achieve operational excellence across their group of companies. We are honored that our industry-leading AI-powered IDMC platform has been chosen to help Ricoh simplify data management and support them in delivering positive outcomes in customer experience and service quality.”

Schneider Electric Collaborates with GR3N to Tackle Plastic Recycling Challenges and Drive Circularity in Chemical Sector

9 September 2024

Schneider Electric, the world’s most sustainable company and leader in the digital transformation of energy management and automation has partnered with GR3N, the Polyethylene Terephthalate (PET) chemical recycler to create the first open automation system for the advanced plastic recycling industry.

With 50% of global plastic waste ending up in landfills and only 9% recycled, GR3N developed MADE, the Microwave Assisted DEpolymerization solution. This new process breaks down PET into its chemical building blocks that can be recombined to create new PET pellets with virgin-like quality for packaging and textiles, effectively closing the loop for hard to recycle plastic. The technology is based on alkaline hydrolysis, and it can manage a higher amount of impurities compared to the existing ones.

In March 2024, GR3N successfully demonstrated MADE and the power of Schneider Electric’s open automation technology, EcoStruxure Automation Expert at its demonstration site in Italy. MADE plant is conceived to anticipate the usage of all the technologies that will be finally adopted for the first industrial-scale facility, foreseen to be installed in Spain and with an expected capacity of over 40.000 ton/year of PET waste treated. The intrinsic modularity of GR3N’s proprietary recycling process has allowed MADE to be the first plastic recycling plant to use the shared automation runtime managed by Universal Automation, based on the IEC 61499 standard.

The software-defined automation system decouples hardware from software, allowing devices and equipment to be freely connected across architecture layers, regardless of manufacturer. It acts as the digital backbone of industrial operations at the plant, providing the foundation to make more informed decisions. This approach allows MADE to be also technological demonstration of a new generation of automation systems, where the intertwining between OT and IT enables the exploitation of advanced functionalities for operations management and data analytics.

“Through software-defined automation and hardware independence, we have been able to effectively de-risk our operations and push the boundaries of our technology,” said Fabio Silvestri, Head of Marketing and Business Development at GR3N. “We’ve been able to reconfigure our systems quickly when we see opportunities to improve efficiency, while avoiding supply chain issues due the hardware agnostic nature of the system. This is what is needed to make advanced plastic recycling at reality at scale.”

Due to EcoStruxure Automation Expert's modular, agnostic nature, GR3N was able to choose the optimal technology for the demonstration plant and easily scale to new sites. Benefits include:

- **Industrial scalability** – significantly minimizes the risk of investment during the scale-up of GR3N's technology towards the First of a Kind (FOAK) industrial plant, while offering a new way to protect its intellectual property as process licensor.
- **Design flexibility** – vendor and hardware agnostic system enabled GR3N to design the best possible solution without being held back by vendor lock in or being impacted by supply chain issues.
- **Engineering time and time-to-market reduction** – the modular design of control software, supported by digital continuity across the whole plant lifecycle with automation-focused decision making happening at conception, reduces human error at the development stage by 40%.
- **Control simplification** – Vendor-independence allows controls to be distributed or centralized depending on need.
- **New opportunities** – OT/IT integration provides new opportunities for efficiency and optimization across the whole value chain. thanks to a seamless incorporation of advanced data analytics techniques.
- **Reduced costs** – the software-defined approach to automation is expected to reduce engineering costs by 30%.
- **Next-gen workforce** – attracts the next generation of workers with a systems that shared similarities with those in IT.

Global demand for plastics is expected to triple by 2060, with the amount of plastics in the ocean predicted to outweigh fish. Meeting demand and curbing pollution, while achieving net zero by 2050, requires a consumption model revolution.

The partnership between GR3N and Schneider Electric, that has started with the signature of a Memorandum of Understanding, will enable the chemical recycler to scale operations to new sites quickly and cost-effectively. The solution is expected to reach industrial scale by 2027 with the construction of a 35-40kta plant which will include the pre-treatment, depolymerization and repolymerization.

“Every year, people produce around 460 million tons of plastic, approximately 70% of which are sent to landfills or mismanaged,” said Christophe de Maistre, President Energy & Chemicals, Industrial Automation at Schneider Electric.

“If we want to overcome the scale of plastic waste, there are certain non-negotiables. We must see integration across the whole product cycle, modularization to optimize and standardize engineering processes, as well as software defined automation solutions that delivers scalability, break siloes and acts as a gateway to advanced analytics. This project with GR3N

demonstrates all of these principles, improving flexibility, scalability and the efficiency of their solution and enabling them to grow to an industrial scale.”

ST Engineering MRAS Deploys Plataine to Digitize its Shipment Process, Leveraging Secure Digital Passport Technology

10 September 2024

ST Engineering MRAS (MRAS) is implementing Plataine’s Supplier Connectivity Manager solution to digitize its shipment process, marking a significant milestone in its journey towards full digitization. The AI-powered cloud solution reduces MRAS’ shipment receiving process from hours to minutes, significantly enhancing operational efficiency, improving quality and reducing error-driven scrap rates.

Once fully implemented, this process will help boost MRAS’ operational efficiency and enhance supply chain collaboration by streamlining operations across its suppliers, providing a holistic view of material genealogy throughout its entire lifecycle, from raw materials to finished parts.

Previously, the shipment process at MRAS was more manual and labor-intensive, involving reviews of hundreds of quality files and Certificates of Compliance (CoCs) detailing each material lot’s quality information. MRAS hence sought to further digitize its production, automate the shipment process from suppliers, digitize CoC documents, and reduce receiving inspection time.

It chose Plataine to create a digital process, enabling a smooth and streamlined shipping operation from the material supplier to MRAS. As part of this digital workflow, all shipment information is digitally and securely uploaded to Plataine’s cloud on the suppliers’ side, ensuring a seamless and transparent process. A Digital Passport is created for each material lot, providing a comprehensive record of its production and quality attributes.

Prior to shipping, the materials are approved and verified swiftly and accurately, before being loaded onto the truck, where MRAS can track the shipment status and content in real-time using Plataine’s solution. This digital process eliminates potential errors and simplifies the workflow, significantly reducing the exposure time of time-sensitive materials. Additionally, all data will be automatically updated into MRAS’ Enterprise Resource Planning system, closing the loop and ensuring that all records are accurately archived in the Digital Passport, saving valuable time and resources.

Mitchell Smith, VP of Operations, ST Engineering MRAS: “With this step in our journey towards a complete Digital Passport, we’re looking forward to obtaining greater clarity of our material parts’ genealogy, from raw material to the finished product. By leveraging Plataine’s solution to help us automate shipping and receiving processes, we aim to achieve greater operational efficiency and higher first-time-right quality.”

Avner Ben-Bassat, President & CEO, Plataine added: “By digitizing their shipment process and transitioning all documentation seamlessly to Plataine’s secure cloud software, ST Engineering MRAS will be taking another significant step forward in its commitment to building an

innovative and fully digital factory. This sets a new standard for efficiency and accuracy in the aerospace industry.”

Meet us at CAMX, San Diego Convention Center, booth #PP26.

Product News

3D Systems Announces Significant Milestone in Commercialization of Oqton Manufacturing OS

9 September 2024

3D Systems announced it has achieved a significant milestone in commercializing Oqton Manufacturing OS. This solution is designed to enable on-demand additive manufacturing (AM) in regulated markets by providing full factory-floor workflow integration thus transforming how products are brought to market. Baker Hughes, an energy technology company, is now in full production with Oqton Manufacturing OS in its central manufacturing facilities in Houston, Texas. This marks a significant milestone in the **commercial software agreement** Baker Hughes entered with Oqton, a wholly owned, independently operated subsidiary of 3D Systems, in March 2023 and reinforces the companies’ shared vision to support decentralized manufacturing. The successful implementation of this solution by Baker Hughes demonstrates the Oqton Manufacturing OS’ ability to accelerate the design and production of additively manufactured parts across the entire manufacturing workflow to increase efficiency and facilitate regulatory compliance.

Baker Hughes began using Oqton Manufacturing OS and the Oqton operating system in June 2024 to scale the role of AM within its manufacturing workflow without compromising quality or the user experience. The system integration enables Baker Hughes to efficiently scale its production output while minimizing investments in the support structure. Additionally, the end-to-end system facilitates the monitoring of key performance indicators through the production workflow. For build monitoring alone, Baker Hughes realized a 98% reduction in active monitoring engineering time, saving 136 engineering hours per printer annually. Root cause analysis has also decreased 98% through Oqton’s automated reporting. Additionally, Baker Hughes realized an 18% reduction in costs associated with scrap due to real-time actionable alerts during part production.

Oqton Manufacturing OS helps customers move from prototyping to a repeatable, high-quality production additive manufacturing process, with full traceability from raw material through finished component which is essential for high-reliability applications. Oqton Manufacturing OS manages, optimizes, automates, monitors, and traces actions and data to increase throughput, scale production, and maximize operational efficiency. The solution is designed to address all key aspects of an end-to-end manufacturing workflow including:

- Order management via a customer and supplier portal for order intake, capacity and demand planning, and quoting and approvals.

- Engineering through 3DXpert enabling design for additive manufacturing (DfAM), build process preparation, simulation, AM inspection, and digital rights management for functional efficiency.
- Digital warehousing that provides user access segregation control with multifacility workflow management.
- An additive manufacturing-based MES (manufacturing execution system) enables operational excellence, management and traceability.
- Production monitoring based on internally developed IP uses analytic-driven and deep learning capabilities to detect and alert anomalies in real-time.

“We are pleased to achieve deployment of this solution with our strategic partner, Baker Hughes,” said Reji Puthenveetil, EVP, additive solutions & chief commercial officer, 3D Systems. “Oqton Manufacturing OS’ holistic approach to manufacturing, alongside Baker Hughes’ expertise in production for regulated industrial environments, has enabled us to demonstrate the real-world impact of this unique solution. Following this key demonstration of Manufacturing OS’ ability to drive efficiencies, increase automation and achieve savings in complex industrial environments, we are looking forward to its continued adoption.”

“The Manufacturing OS production software improves efficiency through the automation of the complex process, from order requirements, design revision controls, qualified build setups, traceability and reporting. It provides the tools to industrialize at scale the manufacturing without compromising the quality assurance of its production,” said Jim Apostolides, senior vice president, enterprise operational excellence, Baker Hughes.

Oqton Manufacturing OS enables the next generation of manufacturing automation connecting existing applications and machines across facilities in multiple sites to enable collaboration. When combined with additive manufacturing solutions, it reduces time to final high-quality, reliable, and high-performance components designed to meet or exceed design criteria. The experts within Oqton, and more broadly 3D Systems, have extensive experience helping customers in regulated industries meet these goals through tailored solutions. As a result, manufacturers can produce parts more efficiently while reducing costs.

Aurigo Expands Right of Way Offering to Local and Regional Agencies

4 September 2024

Aurigo Software, North America’s leading capital planning and construction management solution provider, announced the introduction of Masterworks Right of Way Pro, a new edition of its widely adopted right of way product, specifically designed for mid-sized teams. This software will enable local and regional agencies to streamline land acquisition processes, improve project outcomes, and maintain compliance across their portfolios.

Over the years, Aurigo has delivered robust software solutions that have helped large public sector right of way teams. These tools have historically been tailored to serve agencies responsible for thousands of acquisitions annually and may take months to deploy. Recognizing the need to make these capabilities accessible to the broader market, Aurigo has developed

Masterworks Right of Way Pro, designed to bring higher levels of digitization to teams managing fewer than a thousand land acquisitions per year.

“We wanted to create a solution that empowers smaller right of way teams to leverage the same level of efficiency and automation that larger teams have been enjoying for years,” said Balaji Sreenivasan, CEO and founder of Aurigo Software. “Right of Way Pro offers a powerful toolset that simplifies land acquisitions and negotiations, thereby ensuring more predictable outcomes.”

Masterworks Right of Way Pro is a cost-effective, pre-configured solution that is faster to deploy. The software’s automated workflows are designed to reduce risk and save time by providing integrated management of land appraisals, purchase agreements, and relocation processes. The system’s document management features ensure the secure maintenance and accessibility of all critical contracts and correspondence, promoting stakeholder collaboration.

The product helps teams streamline environmental and legal clearance throughout complex negotiations, ensuring the completion of all steps in compliance with regulations. Additionally, its inspection and appraisal capabilities allow internal and external users to track real-time progress, further enhancing operational efficiency.

“Right of Way Pro is a direct response to the feedback from our customers, offering them best practice workflows that are quick to implement,” said Pete Olds, Vice President of Professional Services and Customer Success at Aurigo Software. “This product brings together agency staff and their external consultants to speed up decision-making on their right of way initiatives.”

As more public agencies look to modernize their capital programs, Aurigo is experiencing significant growth in its local and regional customer base, which includes cities like Seattle, Portland, and Las Vegas, as well as regional agencies across Colorado, Florida, and Ontario, Canada. The company recently released Aurigo Essentials, a streamlined version of its construction project management solution for city and county public works departments, water authorities, and other local and regional entities.

CAM Assist, the first AI add-on for CAM, is now available for Siemens’ NX

13 September 2024

CloudNC - a manufacturing technology company - announces that its CAM Assist solution, which uses AI to generate machining strategies for 3 and 3+2 axis CNC machines, is now available for Siemens’ NX™ CAM users.

The new software is available as an AI-enabled add-on for Siemens’ NX software for product engineering and manufacturing, one of the world’s most popular CAM software solutions, used by major corporations and machine shops alike. The development means more CNC programmers globally can use CAM Assist, helping them easily program toolpaths and machine parts more efficiently than ever before.

Theo Saville, chief executive and co-founder at CloudNC, said: “Siemens’ NX is used by manufacturing leaders in some of the most important global industries, like aerospace and defence, automotive and industrial machinery. Simplifying the programming process within

those sectors is critical if those manufacturers are to remain competitive, and CAM Assist will help their CNC programmers save time on their toolpath creation and part manufacture and become even more efficient and productive.”

“At Siemens Digital Industries Software, we are committed to delivering innovative solutions that help our customers accelerate the part manufacturing process, using the latest breakthrough technologies. Enabling our customers to use CloudNC technology to automate CNC programming in NX CAM exemplifies our dedication to continuous advancements,” said Armin Grunewald, Vice President at Siemens Digital Industries Software. “The openness of the Siemens Xcelerator portfolio of industry software enables our ecosystem of technology partners to rapidly integrate their specialized solutions, which in return helps us to expand a comprehensive digital manufacturing software portfolio.”

CAM Assist uses advanced computer science techniques and AI to generate intuitive machining strategies in minutes or seconds, depending on complexity, which could take CNC machine programmers hours or even days to manually create.

As a result, the amount of time it takes to program a CNC machine to make a component - a bottleneck in many factories – is greatly reduced, compared to the previous manual programming process, as is the time spent to estimate how much a new component will cost to program. That gain enables manufacturers using CAM Assist to raise productivity and shorten lead times, while also estimating for more work, more quickly.

Efficiently evaluate requirements with CIM Database PLM

6 September 2024

CONTACT Software has added a new application to its PLM module for Requirements Engineering. The ReqXpert helps companies to evaluate all product requirements quickly, easily, and reliably.

Customers, legislators, and consumer advocates place high demands on products. In some industries, ensuring safety, quality, functionality, and sustainability is particularly complex. Examples of this can be found in medical technology, mobility, and mechanical engineering sectors. With CONTACT Software’s Requirements Engineering, companies can systematically capture, categorize, and prioritize the vast array of requirements while transparently tracking their implementation throughout the development process.

As part of CIM Database PLM, the application allows companies to link requirements, enabling to identify how they interact with mechanical, E/E, and software-based product components. An audit trail automatically records every change and helps to avoid errors as well as costly rework, significantly speeds up product development, and simplifies documentation obligations.

CONTACT Software has now added another tool to make requirements management even more efficient. The new ReqXpert supports the evaluation process with two views of a product’s specification, each tailored to the specific tasks of the users. The “My Responsibilities” view lists all the requirements of a specification that a particular person is

responsible for. Here, users can assign individuals to assess specific requirements and track their evaluation status at any time.

The evaluation process in ReqXpert is integrated with the task management in CIM Database. This means that evaluators can find their assignments in their task boards, and in the new “My Evaluations” view, they can see all the requirements within a specification that they need to assess. Additionally, they can simultaneously determine whether these requirements are technically feasible without leaving the overview.

This enhanced requirements management is just one of many new products CONTACT Software will showcase at Open World 2024 in November. All of them are part of the next version of CONTACT Elements, which will be available for download to customers and partners in September.

Exiger Achieves FedRAMP® Authorization for Supply Chain AI

12 September 2024

Exiger, the market-leading supply chain and third-party risk AI company, announced that Exiger Federal Cloud has achieved Federal Risk and Authorization Management Program (FedRAMP®) Moderate Authorization. The announcement marks a major milestone in the continued expansion and enhancement of Exiger’s offerings across the U.S. Federal Government.

“The expanded government-wide FedRAMP Authorization simplifies and streamlines the experience for our government and Defense Industrial Base (DIB) customers that rely on Exiger’s AI solutions and the 1Exiger platform to secure their critical supply chains,” said Exiger President Carrie Wibben. “It eliminates the need to swivel chair between systems and enables fully integrated workflows and decisioning within Exiger’s secure environment, allowing customers to aggregate, maintain and utilize Controlled Unclassified Information (CUI) in conjunction with Exiger’s proprietary data and intelligence.”

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Carrie Wibben
PRESIDENT, EXIGER

FedRAMP is a government-wide program that promotes the adoption of secure cloud services by providing a standardized approach to security and risk assessment for cloud technologies and federal agencies. FedRAMP was created to empower agencies to use modern cloud technologies with an emphasis on security and protection of government information. The program reduces duplicative efforts and costs inefficiencies across the government while establishing a public-private partnership to support innovation and the advancement of more secure information technologies.

“Exiger is committed to delivering cutting edge capabilities to the U.S. Federal Government and DIB while also meeting the highest standards in security and government,” said Exiger Chief Information Security Officer Clewin McPherson. “With FedRAMP’s continuous monitoring,

Exiger's customers are gaining not only a new level of transparency and accessibility but also a new level of confidence in our security posture."

"Exiger is committed to delivering cutting edge capabilities to the U.S. Federal Government and DIB while also meeting the highest standards in security and government."

Clewin McPherson

Chief Information Security Officer, Exiger

Exiger's FedRAMP Authorization is the result of a multi-year process and sustained investments to build enhanced cloud systems that satisfy expanded government and National Institute of Standards and Technology policies and procedures. The Department of Energy previously accredited the Exiger Federal Cloud environment at FedRAMP Moderate in 2023. Exiger's updated government-wide status is now live and searchable on the FedRAMP Marketplace. In addition to FedRAMP Moderate Authorization, Exiger maintains ISO 27001 and SOC 2 Type 2 certifications.

GibbsCAM 2025 AI features to be launched in September

9 September 2024

GibbsCAM, a leading CAD/CAM innovator in the production machining industry, is pleased to announce the latest software release that includes AI.

The latest version will be launched in the U.S. at IMTS in Chicago and in Germany at AMB in Stuttgart. In this new release, GibbsCAM 2025 places a strong upgrade to incorporate cutting-edge turning technologies, equipping their clients with AI capabilities, and offering convenient access to extensive manufacturing and tooling expertise. GibbsCAM continues to integrate Sandvik's cutting-edge manufacturing and tooling know-how into its development efforts. Giving customers significant improvement in efficiency and productivity, both in engineering and production.

Unlocking the full potential of turning

In its latest version 2025, GibbsCAM provides full support for Sandvik's OptiThreading™, further enhancing its CAM solution. GibbsCAM took the first step towards integrating and supporting multiple turning technologies from Sandvik by introducing Sandvik Coromant's PrimeTurning™ technology into GibbsCAM 2023. With the implementation of enhanced Y-axis turning capabilities (simultaneous sweeping) in last year's release, GibbsCAM continued to work towards its goal of becoming the CAM solution of choice for Sandvik Coromant's turning technologies.

With the insert positioned in the Y-Z plane, Y-axis Turning effectively directs the primary cutting forces into the milling spindle, providing exceptional stability. This yields superior chip control, improved surface finish, and increased cutting speeds. Furthermore, the inclusion of a third axis for tool rotation allows for optimal positioning of the tool, enabling the cutting of intricate shapes with a single tool. This also enables a seamless "sweeping" motion for cutting complex shapes, preventing any blend marks and ensuring precise control of the insert wiper effect.

Sandvik Coromant's OptiThreading™ provides a pioneering thread-turning technology. GibbsCAM's new turning strategy for OptiThreading™ enables controlled chip breaking to eliminate long stringy chips that can damage a component's surface and interfere with the cutting zone. It is just as suitable for simple threads as it is for cutting complex thread profiles, in high-strength alloys or exotic materials.

Using cutting data from the CoroPlus® Tool Library, OptiThreading™ enables users to develop optimized thread-turning tool paths that specifically overcome the challenge of chip control with these operations. This is achieved by specialized GibbsCAM tool paths that use controlled, oscillating movements in and out of the cut for interrupted cuts on all passes except the last one. The result is controlled chip control for improved component quality, faster cutting speeds, and less manual work by reducing the need to manually clear long chips during the machine run cycle.

For both Y-Turning and OptiThreading™ GibbsCAM 2025 offers best-in-class programming strategies unlocking the full potential of these fantastic technologies.

With Rib Cut Plunge, GibbsCAM 2025 offers another powerful new turning strategy. This special turning strategy for roughing reduces tool deflection, improves tool life, and guarantees excellent chip control. Within a preliminary operation, the tool repeatedly plunges into the part at full engagement to create a series of cuts with each cut more than a tool-width away from the previous one. The following pass cuts the remaining ribs at a 30-50% increase in feed.

As the leading CAM solution for Swiss-type machines GibbsCAM 2025 introduces a new option for the headstock origin. This allows the NC programmer to define a value for the distance between the front of the guide bushing and the headstock's 0 position. With that, the correct positioning of simulation bodies on the headstock axis becomes easier. It provides a more intuitive interface in the dynamic coordinate definitions for Swiss-style machines.

Fast and effective AI support

GibbsCAM's goal is to make manufacturing knowledge more accessible through AI, empowering human creativity at every stage.

The introduction of the GibbsCAM Copilot is part of Sandvik's commitment to embrace AI for the user's benefit. It represents just the start of a longer-term initiative to maximize productivity and profitability by implementing AI technology. Accessible directly from the Online Help menu, GibbsCAM Copilot uses Microsoft Azure Open AI on top of a dedicated database, trained by the GibbsCAM team, to offer rapid user support at any time without the need to hunt through documentation or reach out for first-line support.

GibbsCAM 2025 offers a new plug-in to up2parts autoCAM and makes this powerful tool for automated NC programming available for its users. Utilizing 3D models with tolerance information, up2parts autoCAM automatically generates proposals and recommendations for six-sided machining, including clamping, machining steps, operations, and tools by using AI technology. This leads to reduced engineering time by automating the NC programming based on geometry and PMI. GibbsCAM users can upload the information into GibbsCAM, post process immediately, or simulate and edit before if needed.

Comprehensive performance boost throughout GibbsCAM 2025

Visualization of multi-flow operations

Within its powerful Multi Task Machining solution, GibbsCAM supports the most complex machining centers with an unlimited number of axis and any axis orientation. To always give the user the best view on the defined multi-flow operations, GibbsCAM 2025 provides additional Operation Tile Modes to display multiple flows independent of the MTM Sync Manager. Users can choose to Show All Flows for a comprehensive view, Show Each Flow for focused management, or use Sync Flow Mode to coordinate displays across operations, improving organization and control of multi-flow processes.

Facet Body Function

Facet bodies can play an essential role in modern CAM workflows, bridging potential gaps between design and manufacturing, and enabling precise and optimized production processes. GibbsCAM 2025 provides users with powerful tools for manipulating facet body models without the need for external CAD software.

The new Facet Body Modelling palette supports a wide range of specific editing functions, including Tessellate, Simplify, Re-facet, Heal, and Smoothing of facet bodies. Many existing Solid Modeling functions now support FB such as Booleans, Slice, Separate, Offset/Shell, History, and more. With this new functionality, GibbsCAM users can now easily work with FB models such as parts, machine components, fixtures, and In-process Stock Models directly within GibbsCAM.

Powerful tool management

GibbsCAM 2025 brings further improvements to tools and tooling. The new Order Tool utilizes important information from tool libraries, such as the item/catalog number and manufacturer. This information will be gathered through a tool catalog integration, including trusted sources like CPTL, Garr Tool, Harvey Tool, etc. Upon clicking on the icon, the user will be directed to purchasing/ordering pages, in a specific Tool Library site, where that tool originated from.

Simulator Enhancements

The Simulator in GibbsCAM 2025 offers enhanced features for superior control and visibility during simulations, ensuring program accuracy. A new stop option allows the simulation to pause before each operation. Additionally, a new scrolling bar in the Sync Manager tracks simulation progress, providing real-time feedback for MTM machining operations. The innovative "Rotary Hint" option graphically displays the spindle direction for both Turning and Milling. To enhance safety, collision detection, and alerts are now activated by default.

Discussing the new release, GibbsCAM President Thorsten Strauß says: "GibbsCAM 2025 marks the beginning of a new era in terms of AI support for manufacturing. Now, we're the first CAM system in the market offering an AI copilot based on Microsoft's Azure Open AI. Additionally, thanks to our cooperation with up2parts, we can provide our customers now with a powerful AI-based toolpath generator. These are significant steps for the CAM world, and for GibbsCAM also.

By releasing these innovative solutions, we demonstrate our ambition to extend our technology leadership in this area. For sure, completing our joined developments together with SANDVIK

and numerous other improvements all over the GibbsCAM suite makes us more than excited to make this comprehensive update available now for our customers. And I can already promise that we are already working on additional powerful improvements now."

Global release of Hexagon's AI-powered Blast Movement Intelligence set to transform blasting outcomes in mining

12 September 2024

Hexagon, the global leader in digital reality solutions, announced today the global release of its AI-powered 3D blast movement solution, Hexagon Blast Movement Intelligence (BMI).

In partnership with Augment Technologies and through integration of an AI-driven blast movement engine, Hexagon BMI has been proven in real-world mining conditions. Boosting blasting efficiency and providing high visibility into ore dilution for informed ore and waste delineation post-blast, it safely produces an accurate block model of the muckpile and ultimately maximises yield.

The ability to generate a Muckpile Block Model™—a post-blast representation of the grade control block model—is a distinguishing feature of BMI. Paired with Hexagon Blast Movement Monitors, the AI can be validated and improved as the engine helps to safely and rapidly produce the Muckpile Block Model™. Importantly, the model is produced without personnel having to walk on the muckpile to place or retrieve the monitors.

What also makes BMI unique is its integration with Hexagon's MinePlan Block Model Manager, a data-integrity solution built for collaboration and data sharing across different roles and mining phases, eliminating errors and undue complexity in the block modelling process. By centralising data and using server-based features like block model management, version control, and change notifications, Block Model Manager ensures the integrity and auditability of data. Its application programming interface improves the access, reuse and integration of that data with other systems to enhance mining operations.

"Our Blast Movement Intelligence solution has proven profoundly useful for optimising downstream processes," says James Dampney, Vice President Resource Optimisation and Material Movement at Hexagon. "It can quickly interpret complex data, learn from that data, and estimate movements based on that data, getting smarter with each blast so that the model is machine-precise, improving the thousands of decisions that cascade from resource modelling and ore delineation."

BMI not only enables mines to quickly, safely and confidently define with a high level of precision the routing of the revenue-producing material but also empowers them to conserve energy throughout the rest of comminution, ultimately improving ore recovery and yielding a better bottom line.

Armed with the additional insights from MinePlan Block Model Manager, Hexagon's BMI serves as a data-rich, high-fidelity blast movement solution that can positively impact every stage of the downstream mining process. Its global market availability marks a pivotal development in meshing safety and efficiency in the industry.

Golden Software Enhances Surfer Mapping and 3D Visualization Package with Map Templates and Online Image Access

11 September 2024

Golden Software has added significant time-saving features to the latest version of its Surfer mapping and 3D visualization software. Users can now choose from more than 20 frame templates to quickly create their maps and project files. They can also easily download georeferenced aerial and satellite images from new online services with reliable, global coverage to add context to their maps.

“Our primary goal with the latest Surfer was to save users time in making high-quality visualizations,” said Surfer Product Manager, Kari Dickenson. “The new templates and direct access to these new online image servers means that Surfer users create their final 3D visualizations faster and with fewer clicks.”

Over 100,000 people have used Surfer worldwide, many are involved in environmental consulting, water resources, engineering, mining, oil & gas exploration, and geospatial projects. The software has been relied upon for more than 40 years by users in numerous disciplines to quickly transform complex data into superior 2D and 3D visuals with accuracy.

Known for its fast and powerful contouring algorithms that regularly outperform more expensive packages, Surfer enables users to model data sets, apply an array of advanced analytics tools, and visually communicate the results in a way that even the non-technical stakeholders can understand.

Golden Software has made the following enhancements in the latest Surfer version released today:

Enhanced Base from Server Command – Georeferenced aerial and satellite images add real-world context to maps and visualizations, but finding servers that provide images in the locations and resolution the users want has been a difficult and time-consuming process. Now, however, users can connect to numerous online XYZ Tile servers with a click of the mouse to download imagery for use as base maps in their Surfer projects. XYZ Tile server support gives users access to global databases of quality, georeferenced maps, aerial photographs, satellite images, and similar data sets from OpenStreetMap and other online services.

Frame Templates – Users frequently want to create a series of maps and visualizations with identical design layouts, page sizes, and elements, such as title block, logo, legend, and frame style. Previously, users had to recreate their custom templates manually for each new project. To streamline layout creation and eliminate manual reproduction, Surfer now comes with 23 frame template files that users can choose from and tailor to their needs, to quickly generate a map design and save it for repeated use.

Upgrades to 3D View – The latest Surfer includes enhanced features and commands that have been streamlined for faster creation of visualizations with fewer clicks and less manual repetition.

- Copy and Paste Format – Users creating multiple similar 3D visualizations once had to manually reproduce the exact same properties in each one. Now users simply copy the properties of an existing visualization in the 3D view and paste all its properties – colors, values, clipping plane – to a second visualization.
- Orientation Triad – A new Triad in the corner of the 3D model lets the user know the compass orientation of the model in the view.
- Orthographic Projection – With a single click, users can switch from the default Perspective projection to an Orthographic projection, which means lines remain straight and orthogonal regardless of distance from the viewer. This makes it much simpler to measure and digitize points in the 3D model.
- Predefined 3D views with keyboard shortcuts – Rotating a 3D model with the mouse to get a view perfectly aligned with precise compass directions was tricky. Now users can rely on keyboard shortcuts, or use the ribbon commands, to view the model exactly from the Top, Bottom, North, East, South, or West perspective.
- Bounding Box – It’s easier than ever to make your 3D models look attractive for inclusion in reports and presentations. This new function lets users easily draw a bounding box around their entire model, a volume render, or an isosurface.
- Exporting 3D Vector Files – Users often include 3D polylines or polygons to represent features such as buildings or roads in their base maps in Surfer. This geometry was previously impossible to save as 3D vector files for future use. Users can now easily export 3D geometry to a 3D vector file. Whether a user created a 3D polygon in 2D View or imported 3D geometry from a DXF or shapefile, the geometry can be viewed in the 3D view and then exported to a new vector file as 3D geometry, including AutoCAD DXF or SHP.

Surfer Beta Available

As is the tradition, Golden Software has released a Beta version of Surfer simultaneously with the new version to give customers a chance to try out new features and provide feedback while they are still in development. Users may find the Beta version by clicking **File | Online** from within Surfer.

“Our focus with the new Beta capabilities in Surfer is to make it easier for users to create high-quality maps that present their work as professionally as possible,” said Dickenson.

Here are the new Beta features available now in the latest Surfer release:

- Google Maps Download – The Base from Server command has been further upgraded so that users can download basemaps from Google Maps to add context to their visualizations. [Available to licensed Surfer users only.]
- Colorize 3D Drillhole Intervals Based on Text Keywords – Surfer users have always been able to fill drillhole intervals with colors based on numbers, but now keywords such as

“Limestone,” “Granite,” or “Sandstone” can colorize various depth intervals. A color legend is generated automatically.

- **Linked Text** – Users can now link the text in a text object to certain data, such as the filename, the filepath, the date/time or the contents of a cell in a worksheet. A refresh button lets users easily update the text with the latest edits and new information, ensuring the map is always up to date and easy to retrieve.

IBM Launches New Services to Help Oracle Clients Extend Generative AI

10 September 2024

IBM announced it has expanded its consulting services and solutions to help clients derive greater value from Oracle's cloud applications and technology and extend generative AI with an open, orchestrated approach.

The average cost of compute spend is expected to increase by 89% between 2023 and 2025, according to new research from the IBM Institute for Business Value. In addition, 42% of executives report concern that inadequate expertise could preclude progress with generative AI.

To help clients address these growing challenges, IBM Consulting is launching an expanded network of consultants to support Oracle clients, including thousands of consultants worldwide who are certified across core Oracle technologies – such as OCI Generative AI, OCI AI Services, and OCI Data Science – as well as deeply skilled in the IBM watsonx AI and data platform.

The consultants will be committed to helping clients extend high value generative AI use cases coupled with traditional AI and automation solutions, aimed to maximize their return-on-investment and optimize compute and implementation costs. That includes helping clients choose and deploy the right fit-for-purpose AI models for their unique requirements, including enterprise-grade models such as IBM Granite, open source or other third-party models. With their deep skills in IBM watsonx and technologies from IBM's open ecosystem of business partners, IBM consultants can help guide clients' critical decisions around technology architecture, generative AI and software licensing, data and analytics architecture, security risks and more to enhance automation of their workflows and help establish a stronger and more cost-efficient technology foundation for developing and deploying generative AI applications.

In addition, IBM just announced its intent to acquire Accelalpha, a global Oracle services provider with deep expertise helping clients digitize core business operations and accelerate adoption of Oracle Cloud Applications, further expanding IBM's Oracle consulting expertise.

"Our clients are eager to extend generative AI initiatives but they're also concerned about rising compute costs, lack of in-house AI skills, AI assistant sprawl, and management oversight," said Corinne Koppel, Global Oracle Practice Leader, IBM Consulting. "We're proud to bring clients even more skills and solutions to help them optimize their investments with Oracle's full stack generative AI technology leveraging an open architecture."

Helping Extend Oracle Fusion Applications

IBM Consulting is already helping Oracle clients apply generative AI, traditional AI and automation in domain and industry-specific solutions to complement Oracle Fusion Applications' embedded AI offerings. For example, IBM Consulting has helped Oracle Fusion Applications customers expand use cases in human resources, procurement and sourcing, finance and the public sector.

Accelerating clients' time to value with IBM Consulting Advantage

IBM consultants supporting Oracle clients bring the power of the AI-powered engagement platform, IBM Consulting Advantage, to help accelerate clients' time-to-value and improve consistency, repeatability, quality and speed-of-delivery.

For example, IBM Consulting has expanded its OCI migration and modernization capability with generative AI powered assets in IBM Consulting Advantage to help clients fast-track moving their applications and data to OCI. IBM consultants use an asset-first migration approach to support clients from discovery and design to build, migrate, test and deployment.

IBM and Oracle have a 38-year partnership spanning both technology and services, and continue to find new opportunities for collaboration like Red Hat and Oracle's recent announcement of the availability of Red Hat OpenShift hybrid cloud application platform on OCI. Oracle is also part of the AI Alliance, which IBM co-founded in 2023. The AI Alliance brings together leading organizations across industry, startups, academia, research and government to support open innovation and open science in AI.

With deep industry expertise spanning strategy, experience design, technology, and operations, IBM Consulting is the catalyst for business transformation and the trusted partner to over 3,000 of the world's most innovative and valuable companies. Our 160,000 consultants embrace an open way of working, bringing a diverse set of voices, experiences and technologies like hybrid cloud and AI together to accelerate business transformation. Supported by IBM Garage, our proven collaborative engagement model, we bring speed and scale to innovation with an enduring ecosystem of technology leaders to deliver solutions for some of the world's most complex challenges.

Statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

Join Announces Integration with Autodesk Construction Cloud, Enhancing Decision-Making and Operational Efficiency

10 September 2024

Join, the collaborative project delivery platform for the built environment, announces its latest integration with Autodesk Construction Cloud®, a portfolio of software and services that combines advanced technology, a builders network and predictive insights for construction teams. Now, project teams can link accepted Items from Join with Potential Change Orders (PCOs) in Autodesk® Build, streamlining workflow coordination and enhancing data accuracy across project phases.

The integration eliminates the need for redundant data entry between Join and Autodesk Construction Cloud. Project managers often encounter difficulties in managing accepted Items and associated costs across project management platforms, leading to inefficiencies and errors. With this advancement, users can now link accepted Items in Join directly to Autodesk Build PCOs, ensuring that decisions made in Join are accurately reflected and linked to Autodesk Build's comprehensive construction management workflows.

"For general contractors using Autodesk Construction Cloud, the integration empowers them to utilize Join for critical decision-making during preconstruction and early construction phases, seamlessly transitioning decisions into Autodesk Construction Cloud for efficient execution and management during operations," said Jim Forester, Co-founder and Head of Business Development at Join. "This unified approach enhances stakeholder engagement and project transparency, contributing to overall project success and client satisfaction."

Not only does this integration aid in the transition from preconstruction to operations, but it also allows project stakeholders, including owners, to continue leveraging Join's real-time insights and visual interfaces throughout the life of the project. "Once an owner starts looking at Join, they get familiar with it, they trust it, and they want to see that over and over again," says Tony McDaniel, Senior Preconstruction Executive at Messer Construction.

"Construction teams rely on Autodesk Construction Cloud for easy access to critical financial and other project data throughout the project lifecycle," said James Cook, director of industry and technology partnerships at Autodesk. "The new integration ensures that critical decisions made in Join accurately update the Cost Management data in Autodesk Construction Cloud, helping project stakeholders better manage the financial health of their projects.."

This expands on existing integrations between Join and Autodesk® Docs to build collaboration, transparency, and trust among stakeholders throughout the construction project lifecycle. General contractors use Join and Autodesk Construction Cloud together to gain real-time data and insights into decisions, costs, and other critical elements of construction management.

KeyCreator 2025: Now Kosmos Connected

5 September 2024

Kubotek Kosmos is proud to announce the upcoming September release of the 2025 versions of the KeyCreator software family. The 2025 version completes the transition of all native CAD file translation capabilities from major 3D CAD programs to be exclusively based on technology from the Kubotek Kosmos 3D Framework. This means KeyCreator 2025 users will connect to product definition data through the uniquely powerful system which Kubotek Kosmos incorporates in all of its other end-user products and provides to other 3D software communities with similar needs.

This Kosmos CAD translation system began its commercial use over twelve years ago in the hand-off of precise B-Rep data in STEP and IGES files to the ACIS modeling engine in KeyCreator. The system is now directly reading 3D model and 2D drawing files from Dassault Systems CATIA and SolidWorks, Siemens NX, JT and Solid Edge, and PTC Creo. Additionally, 3D models from

Autodesk Inventor, McNeel Rhino, Industry Foundation Classes IFC, and Siemens Parasolid files are read through this system.

“The system has grown significantly and been proven exceptional over the last six years in support of validation of critical Model-Based Definition (MBD) data used throughout manufacturing processes by hundreds of aerospace parts suppliers,” said Ram Eswaran, Kubotek Kosmos CTO/COO. “Kubotek Kosmos is confident these translators are the best solution available and excited to provide them to our long-time KeyCreator customers,” added Eswaran.

Manufacturers Can Now Quickly Produce High-Quality Master Patterns for Investment Casting Production with New 3D Printing Build Processor from Stratasys and Materialise

9 September 2024

In collaboration with Materialise, Stratasys Ltd. (NASDAQ: SSYS) today announced the launch of the Stratasys Neo[®] Build Processor for Investment Casting, a unique solution designed to accelerate the production of high-quality investment casting master patterns.

This new build processor, developed for Stratasys Neo[®] 450 and Neo[®] 800 stereolithography (SLA) 3D printers, offers up to 50% faster file processing and significantly enhanced print speeds, streamlining the 3D printing workflow for manufacturers and service bureaus in the aerospace and other demanding industries.

3D printing master patterns can reduce the investment casting production time from weeks to days, potentially resulting in up to 75% time savings compared to traditional methods of manufacturing, including wax mold and CNC machining. The ability to rapidly produce intricate designs that were previously unachievable with conventional techniques opens up new possibilities for innovation in part design and functionality, specifically with small-series production runs.

The Stratasys Neo Build Processor for Investment Casting is particularly beneficial for manufacturers in aerospace, automotive, and industrial sectors, where speed, precision, and cost-effectiveness are paramount. Combining Somos[®] WaterShed[®] AF resin, Neo SLA technology, and advanced Materialise software with the variable layer thickness feature, produces highly accurate 3D printed master patterns requiring minimal finishing. This streamlined process is designed to yield exceptional metal castings in record time.

“This new build processor advances our mission to provide faster, more efficient solutions for producing high-quality master patterns,” said Rani Hagag, Chief Health Care and Consumer Business Officer at Stratasys. “Partnering with Materialise exemplifies how Stratasys collaborates with industry leaders to drive innovation and help our customers achieve their most challenging production goals with greater speed and precision.”

Materialise’s NxG Build Processor is a configurable software that translates large and complex 3D design files into 3D printable instructions, optimizing the 3D printing process from start to finish.

Enhanced Capabilities

Faster File Processing and Printing Speeds: Achieve quicker turnaround times with faster processing and print speeds by offloading computational tasks to the build processor, optimizing file preparation without compromising part integrity.

Improved Workflow Integration: Streamline workflows and reduce the learning curve for new users with a processor that integrates seamlessly with Materialise's Lattice module and Stratasys's Titanium™ software for Neo systems, minimizing human error.

Superior Part Quality: Enhance surface finish and reduce post-processing time with advanced variable layer thickness options that produce stable, high-quality master patterns.

Customizable Build Parameters: Optimize production with customizable parameters for geometry, supports, and lattices, leading to faster scanning and improved overall productivity.

"Our collaboration with Stratasys focuses on creating seamless integrations between software and hardware to make AM adoption more effortless for our customers," said Udo Eberlein, Vice President Materialise Software. "With the NxG Build Processor for Stratasys Neo printers, we enable a broad set of applications but also unlock new possibilities for niche applications like investment casting, where the flexibility of additive manufacturing meets the reliability of metal casting processes that have been refined over thousands of years. This collaboration helps improve processing speed and print productivity, but is about more than just advancing technology; it's about empowering industries to push the boundaries of what they can achieve with AM."

MathWorks Announces Release 2024b of MATLAB and Simulink

12 September 2024

MathWorks unveiled Release 2024b (R2024b) of the MATLAB® and Simulink® product families today. R2024b introduces several major updates that streamline the workflows of engineers and researchers working on wireless communications systems, control systems, and digital signal processing applications.

In addition to MathWorks platform product improvements, R2024b includes major updates to popular MATLAB and Simulink tools, including:

- Originally built to provide functions for modeling, simulation, and verification of New Radio (NR) and 5G-Advanced systems, 5G Toolbox™ now enables the exploration of 6G waveform generation and signal quality assessments of 5G waveforms.
- DSP HDL Toolbox™ provides hardware-ready Simulink blocks and subsystems for developing signal processing applications. The toolbox now includes a new interactive DSP HDL IP Designer app for configuring DSP algorithms and generating HDL code and verification components.
- Simulink Control Design™ is used to design and analyze control systems modeled in Simulink and now offers the ability to design and implement nonlinear and data-driven control techniques, such as sliding mode and iterative learning control.

- System Composer™ enables architecture specification and analysis for model-based systems engineering and software architecture modeling. The tool now enables customers to edit subsetted views and describe system behavior with activity and sequence diagrams.
- Additionally, a new hardware support package is available for Qualcomm® Hexagon™ Neural Processing Unit (NPU), the technology embedded within the Snapdragon® family of processors. The package leverages Simulink and Model-Based Design to seamlessly deploy production-quality C code across various Snapdragon processors for DSP applications.

“An organization's capacity to deliver high-quality, reliable, and secure products underscores the critical role of simulation and Model-Based Design,” said MathWorks VP of Design Automation Andy Grace. “The enhancements in R2024b are designed to help scale, automate, and streamline key aspects of the workflow, enabling engineers to optimize system performance and reliability.”

Netskope Advances Netskope One Platform With AI-Driven Proactive DEM Solution, Key Security Innovations

10 September 2024

Netskope, a leader in Secure Access Service Edge (SASE), announced several new innovations in the Netskope One platform, including expanded digital experience management (DEM) features and benefits. Combining key network and security capabilities, Netskope One continues to revolutionize the effectiveness of enterprise network infrastructure and operations (I&O) and security teams, enabling the entire organization to optimize the user experience while protecting critical data and reducing risk, cost, and complexity.

Coming on the heels of Netskope being recognized as a Leader in the 2024 Gartner Magic Quadrant™ for Single-Vendor SASE and as a Leader in the 2024 Gartner Magic Quadrant for Security Service Edge, the newly announced Netskope One platform advancements include the following.

Transforming Network Monitoring and User Experience Management

Organizations frequently struggle to identify connectivity issues and quickly isolate the root causes of user experience degradation. This challenge is exacerbated by existing tools that are not designed to support hybrid work environments and cloud-based applications, leading to increased operational complexity and user frustration. To help alleviate these challenges, Netskope continues to expand the Proactive DEM capabilities in Netskope One, with the introduction of Proactive Digital Experience Management Enterprise (Proactive DEM Enterprise).

Proactive DEM Enterprise provides expert-level insight and analytics for security, network, and IT operations teams with a comprehensive 360-degree view of network performance and experience, accounting for end-to-end visibility from user to applications, by monitoring traffic and services across the entire traffic path, including the SASE platform. Proactive DEM

Enterprise delivers granular telemetry and flexible monitoring with true user experience management capabilities at both the user or site level, supporting the business objectives of midmarket to large enterprises. Building upon Netskope's DEM offerings, the newly added DEM solution uses AI/ML-driven network performance diagnostics to help reduce operational costs by providing faster time-to-resolution when troubleshooting, ensuring organizations maintain optimal performance and user satisfaction.

Bringing Traffic Visibility to Secure Service Edge

As users, applications, and security infrastructure move to the cloud, traffic packet captures – once a key resource for providing visibility to security operations teams – are today a blind spot for most SSE solutions. Now generally available for production environments, Netskope Cloud TAP is a packet capture tool that enhances security teams' visibility with the unique ability to capture packets in the Netskope private cloud environment and feed them to advanced security tools like Network Detection & Response (NDR) or Network Performance Monitoring (NPM) for analysis. Netskope Cloud TAP comes ready to use with partner integrations, including from ExtraHop and others to support advanced evasive threat detection, application performance monitoring, help desk troubleshooting, and user experience, plus support for major compliance regulations including PCI DSS, HIPAA, and NIST SP 800-53.

Machine Learning for Automated C2 Beacon Detection

Highly evasive threats use Command and Control (C2) beacons that evade detection by commonly deployed security defenses. The most common mitigation practice today is to hire highly skilled threat researchers to manually analyze traffic to determine malicious beacons. Netskope Advanced UEBA (User and Entity Behavior Analytics) overcomes these limitations thanks to new machine learning (ML) models for automated C2 beacon detection in Intelligent SSE traffic event logs for web and cloud access, helping automate a process that previously required intense manual efforts by security teams to detect malleable C2 beacons, including from in-memory frameworks such as Cobalt Strike, Mythic, and Sunburst.

Evolving The Risk Exchange Ecosystem To Maximize Threat Prevention Efficacy

Every organization has a different risk appetite, which can make it difficult for teams to analyze and normalize risk signals across the different security tools in their ecosystem. The newly expanded Netskope Cloud Risk Exchange (CRE) provides a consolidated business rule framework for continuously identifying and policing risk signals across Netskope SSE and through newly added integrations from Netskope partners including CrowdStrike, Microsoft, Okta, and Wiz. Using the CRE, customers can automate and normalize the exchange of disparate risk signals for the right users, devices, applications, and workloads to the right destinations and outcomes to greatly reduce their attack surface and enhance overall data protection.

"Ongoing innovation and meeting our customers where they are in their cloud transformation and SASE architecture journeys remains core to Netskope's overall charter," said Krishna Narayanaswamy, co-founder and CTO, Netskope. "As a market leader, Netskope enables both network infrastructure and operations (I&O) and security teams to optimize connectivity while reducing risk, cost, and complexity. Combining SSE and SD-WAN across the Netskope NewEdge

infrastructure, the Netskope One platform is the SASE offering that can deliver these capabilities using one engine, one client, one gateway, and one network.”

As part of Netskope One, Proactive DEM Enterprise, Cloud TAP, and the expanded Cloud Risk Exchange are generally available to Netskope customers today. Netskope Advanced UEBA enhancements will be available later this year.

New MathWorks Hardware Support Package Automates Code Generation from MATLAB and Simulink Models to Qualcomm Hexagon Neural Processing Unit Architecture

12 September 2024

MathWorks, the leading developer of mathematical computing software, today announced the availability of a hardware support package for the Qualcomm® Hexagon™ Neural Processing Unit (NPU), the technology embedded within the Snapdragon® family of processors. The MathWorks hardware support package automates code generation from MATLAB® and Simulink® models optimized explicitly for Qualcomm Technologies’ Hexagon NPU architecture to improve data accuracy and standards compliance while improving developer workflow productivity. Using MathWorks software and Model-Based Design empowers engineers to deploy production-quality C code for embedded applications without in-depth knowledge of the NPU.

“Qualcomm Technologies’ mission is to empower engineers to create innovative products and applications that leverage the full potential of Snapdragon processors,” said Vinesh Sukumar, Sr. Director of Product Management, Qualcomm Technologies, Inc. “As the demand for high-performance NPU applications continues to grow, the collaboration between MathWorks and Qualcomm Technologies enables developers to efficiently develop embedded applications optimized for the Hexagon NPU.”

The MathWorks hardware support package for the Hexagon NPU addresses several critical pain points in the development process, including compilation errors, the reliance on hand-written frameworks, manual numeric verification, and the challenge of tracing code back to the model. Engineers without in-depth knowledge of the Hexagon NPU and its toolchain can use the package to run Processor-In-the-Loop (PIL) simulations directly in Simulink leveraging the Hexagon simulator, ensuring that the optimized target code performs correctly, efficiently, and reliably before deploying on the actual hardware.

“By harnessing the power of Model-Based Design and the advanced capabilities of the Hexagon NPU, we are making it easier for engineers to create high-quality NPU applications,” said Jim Tung, MathWorks Fellow. “Our collaboration with Qualcomm Technologies is focused on removing manual processes in favor of highly automated workflows to help engineering organizations reduce time to market and ensure optimal performance.”

MATLAB and Simulink’s automatic code generation capabilities are trusted worldwide by customers in automotive, aerospace, medical devices, and other industries. MathWorks software already optimizes code generation for various processors, including the ARM Cortex-

M, ARM Cortex-A, ARM Cortex-R, Infineon AURIX TC3x and TC4x, and GPUs from ARM and NVIDIA.

New Reality Capture Platform Service Leverages Trimble Connect to Maximize the Value of Geospatial Data for Millions of Users

10 September 2024

Trimble announced its new Trimble® Reality Capture platform service to enable more effective collaboration and the secure sharing of massive reality capture datasets captured with 3D laser scanning, mobile mapping and uncrewed aerial vehicle (UAV) systems. The service is available as an extension to Trimble Connect®, a cloud-based common data environment and collaboration platform that has supported more than 30 million users to date. This service is the most recent addition to the Trimble connected workflow ecosystem, connecting the physical and digital worlds and unlocking the transformative power of reality capture data.

Unlocking geospatial data at scale

Built to drive deeper collaboration among owners, contractors, surveyors and more, the Trimble Reality Capture platform service offers a secure and intuitive web-based solution for point clouds and 360-degree imagery. Professionals across building construction, surveying, transportation infrastructure, utilities, energy, mining and more can now collaborate on complex reality capture projects faster and easier, while maintaining data integrity by retaining original accuracy.

"The new Trimble Reality Capture platform service enables our workforce to more easily access data and collaborate between the jobsite and office, creating additional efficiencies across our operations," said Christopher Pynn, digital leader at Laing O'Rourke for Eastern Freeway – Burke to Tram Alliance. "Having a single place for designers, engineers and other stakeholders to review and inspect project data is a real leap forward."

Delivering a connected ecosystem

This new service securely democratizes access to reality capture data, including massive datasets captured by mobile mapping by terrestrial laser scanners like the Trimble MX series and Trimble X9, as well as data from third-party hardware. Leveraging the extensibility of Trimble Connect that integrates data across Trimble connected software solutions, including Trimble ProjectSight construction management software, SketchUp® 3D modeling tool and Tekla® structural BIM software, as well as third-party system integrators, this new service makes reality capture data accessible to various users. This enables project stakeholders to make more informed decisions and increase operational efficiency by further connecting the site to the office, for end-to-end management throughout a project's lifecycle.

Built for big data

Trimble integrated Microsoft Azure Data Lake Storage and Azure Synapse Analytics to reduce the time ingesting, storing and processing massive datasets. The service is designed to optimize and synthesize data of all sizes for highly efficient management and use of reality capture data throughout connected workflows.

"This new service applies cloud technology in a new way for large data packages, allowing users to significantly scale performance and maximize data value," said Boris Skopljak, vice president, geospatial at Trimble. "Anyone can now benefit from accessing complicated reality capture data through a simple web interface, making it easier than ever to leverage geospatial information to drive better outcomes at every step of the design-build-operate lifecycle. With this launch, we are a step closer to realizing living digital twins and artificial intelligence applications at scale."

"Utilizing the power and multilayered, built-in security controls of Microsoft Azure in combination with Trimble's reality capture capabilities transforms scanning workflows to reduce point cloud analysis time from hours to minutes," said Wangui McKelvey, general manager, Azure data analytics at Microsoft. "Enabling datasets of virtually any size to be easily shared and analyzed across teams means better, safer and more efficient output both on the jobsite and in the office."

Availability

The Trimble Reality Capture platform service is available as a subscription service. Users access their reality capture data through a seamlessly integrated extension in Trimble Connect, alongside their other 2D and 3D data.

New software version of EPLAN eBUILD

9 September 2024

If you automate the creation of circuit diagrams, you get results faster and make fewer errors. Solution provider EPLAN has developed various technological approaches for this. One of them: the cloud-based software EPLAN eBUILD, with which users can generate their projects at the touch of a button. The new version 2025 is now available - with clear advantages in operation, configuration and generation of circuit diagrams.

Creating circuit diagrams automatically is nothing new. But the "how" is becoming more and more innovative, and one thing is clear: the cloud is now indispensable for this. Fully integrated into the EPLAN Cloud, the EPLAN eBUILD software now offers even greater ease of use and maximum simplicity. The new version 2025, which is available now, impresses with numerous improvements for more efficient use of macro technology in engineering. "We have developed a solution that is simple to handle, but at the same time very innovative in terms of its functions," explains Holger Jansen, Business Owner Functional Design.

Operation in the cloud: Even easier and now context-sensitive

The user interface has been optimized so that users can get a better overview of the project more quickly. For example, with the new navigator bar, which allows you to keep an eye on the configuration and generation process in EPLAN eBUILD at all times. But that's not all in terms of technology. "With the new context-sensitive inline app help technology, users can simply get to their goal more quickly," explains Holger Jansen, adding: "The new help function, which is now anchored inline directly in EPLAN eBUILD, makes operation even easier."

How does it work?

The process is extremely simple: users simply log into the EPLAN Cloud and can access their

own projects in the cloud via their company organization. There is no need to install the software. In the Project Builder - part of EPLAN eBUILD - the corresponding macro libraries can be selected and then configured or generated. The new navigator supports this by making the selection easier. Data consistency from product structuring to the actual project implementation is already ensured on the system side by adhering to norms and standards.

Configuration in the cloud: Simply get results faster

A set of rules and configuration interfaces can be created intuitively and quickly without knowledge of a higher programming language - knowledge of EPLAN macro technology is sufficient here. These EPLAN macros are then enriched with a set of rules in EPLAN eBUILD. Users then use the configuration methodology to enter the customer requirements for a machine or system. New in EPLAN eBUILD 2025 is the option of applying the configuration from an Internet browser - under Windows, Android or IOS. There is therefore nothing standing in the way of using EPLAN eBUILD as an engineering configurator on mobile devices.

Generating in the cloud: Simply more collaboration

In addition to configuration, generation in EPLAN eBUILD 2025 is also possible purely cloud-based. A local installation of the EPLAN software is no longer necessary. Circuit diagrams can be generated directly in the cloud via an EPLAN project provided by eManage. Using EPLAN eVIEW, EPLAN's own viewer in the cloud, the projects and documentation can be displayed on any device - be it a tablet, smartphone, browser and of course in both IOS and Android environments. The plans can be checked here and changes can be fed back into the project using redlining and greenlining in the viewer.

Conclusion:

Circuit diagrams can now be created in the cloud using EPLAN eBUILD from an Internet browser. The advantages are obvious: Circuit diagrams can not only be created during the design process, but are also available at the touch of a button early in the quotation or preliminary planning phase.

OpenText IT Management Platform Achieves FedRAMP® Authorization

11 September 2024

OpenText announced it has received authorization for the OpenText IT Management Platform (ITMX) from the Federal Risk and Authorization Management Program (FedRAMP®), advancing OpenText's commitment to providing comprehensive and modern, government-compliant and secure cloud solutions. With ITMX, government agencies can reduce Tier 1 support costs with a full-featured IT service management (ITSM) platform that is less complex and costly to deploy and manage than competitors, while accelerating application delivery through AI and automation.

Public sector organizations face a number of significant challenges when delivering IT services including a reliance on aging legacy systems, high service demands and expectations, as well as resource and budget constraints. According to a survey by Forrester Research, 78% of public sector organizations consider ITSM solutions crucial for delivering on their digital transformation goals. Implementing advanced ITSM solutions helps streamline operations,

reduce downtime, and enhance the overall effectiveness of IT systems by providing structured frameworks for managing incidents, problems, and changes. This all results in improved service quality and response times, which are crucial for meeting the high expectations of public service users. Additionally, effective IT service management helps in optimizing resource use and minimizing costs, making it a valuable investment for maintaining transparency and accountability in government operations.

OpenText ITMX includes Service Management Automation X (SMAX), Asset Management X (AMX), Universal Discovery and CMDB (UCMDB), and Project and Portfolio Management (PPM). United States federal agencies can feel confident using the OpenText solution to deliver modern user services, increase IT productivity and reduce risks and costs.

“The availability of FedRAMP authorized IT service management cloud solutions from OpenText validates our commitment to helping U.S. government agencies digitally transform how they work to deliver an intelligent total citizen experience,” said Muhi Majzoub, EVP and Chief Product Officer at OpenText. “As an important step in the government’s modernization journey, the solution extends the modern, cloud-optimized benefits of IT service management to federal agencies while adhering to ever-tightening and constantly changing security requirements.”

OpenText partner Carahsoft is a top government IT solutions provider, supporting public sector organizations across federal, state and local government agencies and the education and healthcare markets. Carahsoft is a distributor of ITMX and other OpenText products and services.

“The biggest challenge for government agencies to achieve their digital potential is security concerns,” said Craig P. Abod, Carahsoft President. “With the FedRAMP fully authorized stamp, U.S. federal agencies can take advantage of the superior user experiences, advanced AI-based capabilities and industry-best cloud discovery offered by OpenText ITMX.”

OpenText ITMX key capabilities include:

- Single intuitive self-service portal for IT Service Management, AI-driven support, and a mobile app for empowering users and reducing service desk costs.
- Codeless configurations, ITIL-certified processes, plus technology-agnostic workflow and process automation to boost IT productivity while reducing complexity.
- Powerful discovery of traditional IT assets and cloud services, change-risk analysis and IT asset and software license management to reduce risks and control costs.
- Investment and strategy alignment through a top-down and bottom-up analytics approach to application portfolio and project management.

In addition to ITMX, two other OpenText products, Fortify on Demand and OpenText Cloud for Government, have achieved FedRAMP authorization and are also available in the FedRAMP Marketplace.

- Fortify on Demand delivers comprehensive static, dynamic and open source application security testing across the modern software development lifecycle. Fortify allows

agencies to perform automated software composition analysis to identify open-source components and other third-party software in an application, generate Software Bill of Materials and take control over the security of their software supply chain.

- OpenText Cloud for Government combines content capture, storage and document organization with archiving, records management and imaging on a FedRAMP-compliant platform. The OpenText Cloud for Government offering includes OpenText Content Management Platform and OpenText Process Automation, two core business applications within the OpenText Content Services information management portfolio.

PROLIM Achieves AWS Advanced Tier Services Status

9 September 2024

PROLIM, a global leader in PLM, IT, Mendix and Cloud Services, is excited to announce that we have achieved Amazon Web Services (AWS) Advanced Tier Services Partner within the AWS Partner Network (APN). This prestigious recognition underscores PROLIM's commitment to delivering innovative, high-quality cloud solutions and validates our expertise in guiding clients through their digital transformation journey with Amazon Web Services (AWS).

Earning Advanced Tier status reflects PROLIM's proven ability to design and implement robust, scalable, and secure cloud solutions tailored to the unique needs of our clients. Our deep understanding of AWS services enables us to optimize performance, enhance efficiency, and ensure compliance across a wide range of industries, including Healthcare, Manufacturing, Automotive, Defence and Government services.

"Securing AWS Advanced Tier Services status underscores PROLIM's steadfast dedication to excellence and innovation in the cloud services sector. We are thrilled to enhance our partnership with AWS, which will enable us to deliver even more value and transformative results for our customers through PROLIM's MSP solutions, including Siemens Teamcenter, NX, Opcenter, Capital, and our extensive portfolio of over 200 Mendix and IoT apps," said Prabhu Patil, Founder and CEO of PROLIM.

As an AWS Advanced Tier Services Partner, PROLIM is dedicated to empowering organizations to achieve their strategic objectives through cloud adoption. Our expertise in migrating enterprise CAD, high-computing simulations, and PLM applications to the AWS cloud, combined with the use of services like Amazon Elastic Compute Cloud (EC2), allows us to deliver flexible, secure, and cost-effective solutions that drive business growth and innovation.

This accomplishment is a testament to the skill and dedication of the PROLIM team, who continuously strive to leverage AWS technology to its fullest potential. We look forward to continuing our partnership with AWS and helping our clients unlock new opportunities, accelerate their cloud initiatives, and achieve long-term success in an increasingly digital world.

Requirements & Systems Portal Application Now Available on the Altium 365 Cloud Platform

12 September 2024

Altium, a global leader in electronics design systems, announced that it has launched the Requirements & Systems Portal Application into the Altium 365 cloud platform for electronics design collaboration. The Requirements & Systems Portal helps to ensure visibility and awareness of functional requirements from concept to manufacturing, improving upon cost, quality, and risk in the product development process.

The launch follows Altium's acquisition of Valispace earlier this year. Valispace is a game-changing Systems and Requirements Engineering tool that joins system design and requirements engineering with an AI-assisted and data-driven approach.

The electronics design process is disconnected and plagued by rework because the work of PCB design engineers is often disconnected from system requirements. The Requirements & Systems Portal ensures that electrical teams can write, manage, and verify their requirements directly in the Altium 365 ecosystem, allowing team members from different disciplines to view requirements in the context of their designs. When electrical engineers, electrical managers, systems architects and external stakeholders all have access to the same information, everyone on the team knows they are working with the latest values and up-to-date specifications.

The integration of the Requirements & Systems Portal into Altium 365 extends the platform's capability as an end-to-end development platform and supports Altium's goal of connecting everyone involved in the electronics development process.

"The Requirements & System Portal on Altium 365 supercharges innovation and accelerates time to market," said Ananth Avva, VP and GM of Cloud Platform, Digital Industries, at Altium. "By bringing product-level context to the entire electronics design process, engineers can effortlessly ensure requirements are met across applications like supply chain and simulation. This puts systems thinking at the forefront, empowering engineers to thrive in today's competitive landscape and deliver world-class electronic products."

Synopsys Advances Imaging System Development with Industry's First Complete Virtual Prototyping Platform

10 September 2024

Synopsys, Inc. announced the launch of ImSym – Imaging System Simulator, a groundbreaking virtual prototyping platform for imaging systems, encompassing lenses, sensors, and image signal processors (ISPs). By integrating components of the imaging chain into a comprehensive end-to-end simulation platform, ImSym enables tailored optimizations of any imaging system, facilitates team collaboration, and dramatically reduces the risks of issues in later development stages. With accuracy powered by industry-proven CODE V® and LightTools® optical design software and a quantitative end-to-end simulation flow, ImSym reduces the need for physical prototypes and delivers simulations that can directly translate into production-ready designs.

"In today's competitive markets for imaging products, the ability to comprehensively and accurately prototype imaging systems virtually is a game-changer," said Emilie Viasnoff, head of Optical Solutions at Synopsys. "ImSym embodies our commitment to innovation by offering a comprehensive, intuitive, and physics-based software solution for imaging system design and

validation. After decades at the forefront of software for optical design, we are proud to expand our trusted solutions into the virtual prototyping world."

"ImSym represents a significant advancement in optical system simulation by integrating the strengths of CODE V imaging design software with the powerful non-sequential capabilities of LightTools illumination design software," said Olga Resnik, co-founder of the JOYA Team.

"ImSym allows users to seamlessly evaluate full system performance, which is crucial for many applications, particularly in augmented reality design. For the first time, system engineers can simulate all aspects of an imaging system within a unified platform and easily collaborate with experts from multiple disciplines."

Accelerates Imaging System Cycles

Traditionally, optical system builders have relied on one or more physical prototypes to optimize and confirm system performance. These physical prototypes can provide performance assurances, such as image quality assessment, but require significant build times and expenses.

ImSym introduces a dramatically new and intuitive paradigm by offering a comprehensive simulation of the entire imaging chain. ImSym presents users with a series of simulated images at each step in the imaging chain, enabling image quality assessment throughout the simulation flow. This enables optical system builders to quickly get the system right the first time. ImSym models geometric, aberration, and diffraction effects and simulates scene stray light and additive stray light sources. Additionally, ImSym models detector effects on imaging with radiometric accuracy and processes detected images with custom or built-in image and signal processing. ImSym simulates all imaging system components using physics to deliver a reliable solution.

By shifting the majority of imaging system development into virtual prototyping, ImSym can reduce development time from weeks to days, days to hours, and hours into minutes to achieve up to 60 times more efficiency than traditional methods.

Leading-Edge Interface Enhances Team Collaboration

ImSym provides a unified design environment supporting real-time updates and version control, ensuring all team members stay in sync. By encapsulating the entire imaging chain, domain experts—such as system engineers, lens designers, stray light analysts, ISP and detector engineers—can communicate and coordinate effectively, understanding the impact of all system components on overall performance.

The platform features an intuitive interface that guides users through each step of developing an imaging virtual prototype. Additionally, a Python programming language interface enables users to automate ImSym processes and customize ISP capabilities, supporting workflows tailored to users' unique requirements.

Synopsys Powers World's Fastest UCIe-Based Multi-Die Designs with New IP Operating at 40 Gbps

9 September 2024

Synopsys, Inc. announced the industry's first complete UCIe IP solution operating at up to 40 Gbps per pin to address the increased compute performance requirements of the world's fastest AI data centers. The UCIe interconnect, the de facto standard for die-to-die connectivity, is critical for high-bandwidth, low-latency die-to-die connectivity in multi-die packages, enabling more data to travel efficiently across heterogeneous and homogeneous dies, or chiplets, in today's AI data center systems. Synopsys' 40G UCIe IP supports both organic substrate and high-density, advanced packaging technologies to give designers the flexibility to explore the packaging options that best fit their needs. The complete Synopsys 40G UCIe IP solution, including PHY, controller, and verification IP, is a key component of Synopsys' comprehensive and scalable multi-die solution for fast heterogeneous integration from early architecture exploration to manufacturing.

"Heterogeneous integration with high-bandwidth die-to-die connectivity gives us the opportunity to deliver new memory chiplets with the efficiency needed for data-intensive AI applications," said Jongwoo Lee, vice president of the System LSI IP Development Team at Samsung Electronics. "Leveraging Synopsys' new 40G UCIe IP, we can extend our collaboration to develop industry-leading chiplet solutions for tomorrow's high-performance data centers."

"Launching the industry's first complete 40G UCIe IP solution underscores Synopsys' continued investment in advancing semiconductor innovation," said Michael Posner, vice president of IP product management at Synopsys. "Our active contribution to the UCIe consortium has enabled us to deliver a robust UCIe solution that helps our customers successfully develop and optimize their multi-die designs for high-performance AI computing systems."

Advanced capabilities of the new Synopsys 40G UCIe IP solution include:

- **Simplified Solution Eases IP Integration:** Single reference clock feature simplifies the clocking architecture and optimizes power. For ease of use and integration, the IP speeds-up die-to-die link initialization without the need to load the firmware.
- **Silicon Health Monitoring Enhances Multi-Die Package Reliability:** To ensure reliability at the die, die-to-die, and multi-die package levels, Synopsys 40G UCIe IP offers test and silicon lifecycle management (SLM) features. The monitoring, test, and repair IP and integrated signal integrity monitors enable diagnosis and analysis of the multi-die package from in-design to in-field.
- **Successful Ecosystem Interoperability:** For on-chip interconnect needs of the latest CPUs and GPUs, Synopsys 40G UCIe IP supports the most popular on-chip interconnect fabrics including AXI, CHI chip-to-chip, streaming, PCI Express, and CXL. For successful interoperability, the IP is compliant with the UCIe 1.1 and 2.0 standards, which Synopsys helps to develop and promote as an active member of the UCIe Consortium.

- **Pre-Verified Design Reference Flow:** The combination of Synopsys UCIe IP and Synopsys 3DIC Compiler, a unified exploration-to-signoff platform, is used in Synopsys' pre-verified design reference flow that includes all the required design collateral such as automated routing flow, interposer studies, and signal integrity analysis.
- **Broad IP Solutions for Multi-Die Designs:** In addition to UCIe IP and high-speed SerDes, Synopsys offers HBM3 and 3DIO IP to enable high-capacity memory and 3D packaging.

Updated FactoryTalk PharmaSuite Rolls Out “Game Changing” Upgrading Capabilities among Other Key Enhancements

5 September 2024

Rockwell Automation makes it easier to upgrade over multiple versions of FactoryTalk® PharmaSuite® than ever before. With the addition of the high-performance Generic Upgrade Engine that is part of the release of FactoryTalk PharmaSuite 11.02.00, manufacturers can upgrade systems faster, minimizing the downtime required to reap the benefits of the latest software updates.

This latest release also features an improved User Audit Trail experience to help ensure regulatory compliance and traceability by giving manufacturers quick access to a comprehensive, tamper-proof record of system actions. Additionally, FactoryTalk PharmaSuite 11.02.00 includes updates to its Cold Chain Tracking functionality, which enables manufacturers to track thermo-sensitive material to preserve quality and reduce wasted product, and offers the best available state of cyber hardening.

What's New in OpenBOM August 2024

6 September 2024

Oleg Shilovitsky published a post on the OpenBOM blog to announce the new update to OpenBOM. Oleg says, “This release introduces significant improvements across multiple areas, with a strong focus on advancing xBOM management capabilities, enhancing design project permissions, and boosting overall user experience with new QR code and single-item URL features. Additionally, OpenBOM has refined its multiple CAD integrations, highlighted by a major release for Autodesk Fusion, ensuring seamless collaboration and efficiency for engineering and manufacturing teams.”

To read the full blog post please visit: <https://www.openbom.com/blog/whats-new-in-openbom-august-2024>

Zuken Introduces Harness Builder 2025 for E3.series with Enhanced Integration and Documentation Capabilities

11 September 2024

Zuken, a global leader in electrical and electronic digital engineering solutions, is proud to unveil the 2025 version of its industry-leading Harness Builder for E3.series software. This

release introduces powerful new features and enhancements designed to elevate the precision, flexibility, and efficiency of wiring harness design and manufacturing.

“With this release we are focusing more on the application’s usability by expanding the features to our formboard copilot and adding automation to splice handling with direct integration to Telsonic welding machines. In response to customer feedback, we’ll continue to add more exports to industry-standard machinery while maintaining strong relationships with our existing partners.”, comments Paul Harvell, Vice President of Engineering for Zuken USA. “Harness Builder for E3.series is constantly evolving. The latest application update continues to revolutionize the harness manufacturing shop floor.”

Design made Easier with Copilot Enhancements

Harness Builder 2025 transforms the process of drawing a backbone or segment to a specific length making it even more effective. Previously, when utilizing the formboard copilot feature, users could input the desired length of a segment and then quickly add points to the drawing. As users add points, the copilot displays the added segment length, the total length used, and the remaining distance to achieve the total length. With the 2025 release, the formboard copilot feature introduces a new dialog for entering precise point coordinates, angles, and lengths, substantially enhancing design precision and speed. These improvements empower users to create designs with even greater accuracy and efficiency.

Extended Design Variation Support

Utilizing Harness Configuration Information

Options and variants are excellent for expanding your project designs to include multiple configurations. E3.series simplifies creating and assigning options and variants throughout the project. Now, Harness Builder manages this information to generate accurate bills of materials (BOMs) and wire lists based on the active option and variant selection, offering greater flexibility in managing product configurations. The BOM and wire lists will only include the necessary items for the build.

Modular harness design updates

In the 2021 release of Harness Builder for E3.series, we introduced the Dash Number feature to help organize modular harness designs. This feature allows for capturing multiple variations of a harness based on the original design, saving considerable time and effort for design teams. Dash numbers can be used as variables to manage part numbers and cable segments on a formboard, accommodating differences such as environmental requirements and device model variations.

In the 2025 release, we have further enhanced this functionality to improve the BOM outputs. Harness Builder now organizes the BOM outputs into separate tabs for different dash number variants, simplifying complex design management.

Precision-enhanced wire length calculations

Our development team is continuously improving our software to better serve our customers. Our latest release introduces a significant enhancement based on valuable customer feedback. A new length calculation option allows users to add the length to the front of the connector for precise wire length measurements, enhancing design accuracy.

Additional Automation for Manufacturing Documentation

Designers are always looking for automation to reduce time-consuming tasks. The software can now automatically place missing connector table symbols. This improvement increases design efficiency and saves time by eliminating the manual steps of connector table placement.

Advanced Equipment Integration for Manufacturing and Quality

In each new version of Harness Builder for E3.series, we are expanding our integrations with manufacturing and testing equipment. These integrations promote better collaboration between departments and enable increased smart manufacturing automation. The latest release maintains this trend with the following integrations:

- **Adaptronic Harness Testing Integration:** Seamlessly output designs to the adaptronic wire harness testers, ensuring accurate testing and validation directly from the design environment.
- **Telsonic Welding File Support:** Harness Builder now outputs to the Telsonic ultrasonic splice welder, enabling users to control ultrasonic welding equipment directly from their design files, streamlining the manufacturing process.
- **OMA Braiding Machine Output:** Enhance your designs with integrated braiding capabilities. The software now adds braiding to drawings and provides detailed estimates for manufacturing time, yarn length, weight, and cost, ensuring optimal material use and production efficiency.

Enhanced Design Collaboration

Our customers are particularly interested in the direct connection to ERP systems. In this 2025 release, we have expanded our ERP integrations to include a Berrylium interface, enabling a seamless connection of the Harness Builder BOM with Berrylium for comprehensive data synchronization across platforms.

Collaborating with mechanical CAD platforms is also valuable for our customers. Users can broaden their design possibilities with the new support for PTC Onshape. The option to share E3.series connectivity data facilitates smoother transitions between CAD platforms. As a result, users can utilize the web-based PTC Onshape to create mechanical designs.

Committed to Innovation

These updates reflect Zuken's commitment to continuous innovation, ensuring that the Harness Builder for E3.series remains at the forefront of wiring harness design technology. The 2025 release empowers engineers and designers with the tools they need to meet the demands of increasingly complex electrical systems while enhancing productivity and reducing time-to-market.

Harness Builder 2025 for E3.series will be available early this Autumn.