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CIMdata News

CIMdata's James White to be Featured in an Upcoming Webinar on Leveraging Best Of Breed Software With Cloud PLM

15 May 2018

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces that James White, Director for Additive Manufacturing Strategy, will take part in a webinar entitled, "Leverage Best Of Breed Software With Cloud PLM." The webinar will demonstrate how users can best leverage the tools they know while still achieving the enterprise governance they need.

Webinar attendees will gain an understanding about:

- The role of cloud PLM in the manufacturing tech stack
- How cloud PLM helps engineers and business stakeholders collaborate across the value chain
- What the future holds for manufacturing data

The webinar, which is sponsored by Upchain, will take place on Tuesday, 22 May at 1:00 p.m. EDT. To register or learn more, visit <https://www.cimdata.com/en/events/cimdata-supported-events/event/391-webinar-leverage-best-of-breed-software-with-cloud-plm>.

About CIMdata

CIMdata, a leading independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM) solutions. Since its founding in 1983, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on PLM solutions. These solutions incorporate both business processes and a wide-ranging set of PLM-enabling technologies.

CIMdata works with both industrial organizations and providers of technologies and services seeking competitive advantage in the global economy. In addition to consulting, CIMdata conducts research, provides PLM-focused subscription services, and produces several commercial publications. The company also provides industry education through PLM certificate programs, seminars, and conferences worldwide. CIMdata serves clients around the world from offices in North America, Europe, and Asia-Pacific. To learn more about CIMdata's services, visit our website at www.CIMdata.com, follow us on Twitter: <http://twitter.com/CIMdataPLMNews>, or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA, Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands, Tel: +31 (0) 495.533.666.

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Glovius: A Modern CAD Viewer (CIMdata Commentary)

16 May 2018

Key takeaways:

- *A successful CAD collaboration visualization solution must be cost effective, easy to use, and platform independent.*
- *HCL's Glovius solution meets all three business challenges and delivers important capabilities into the hands of downstream users of design data within the organization and the supply chain.*
- *Glovius directly imports CAD and standard CAD formats without needing a license to any CAD solution.*

Collaborative visualization holds the promise of transforming product development—reducing time to market, improving product quality, and enhancing product capabilities to best satisfy customer and market needs. Initial entry into collaborative visualization begins with the ability to leverage design engineering's virtual CAD models and share them with downstream technical and business organizations, the supply chain, and customers. An effective collaboration visualization solution, however, requires extensive capabilities beyond just viewing.

The business environment for new product development faces three major challenges that must be overcome to provide a successful collaborative visualization solution. The first is it must be cost effective. No company, especially small- to medium-sized businesses, can afford to purchase CAD licenses for all the potential downstream users who need to view and work with the CAD model and drawing data. Nor can they ask their suppliers and customers to purchase CAD licenses. The second challenge is closely related to the first. The collaborative visualization solution must be intuitive and easy to use. Requiring the use of a full CAD license to view product models fails because of the sophisticated nature of CAD applications' interfaces—they are too difficult to learn to use and require substantial training. The third challenge for an effective collaboration visualization solution is it must be platform independent and available not only on desktop and laptop computers but also run in the cloud for use on a wide range of mobile devices including work tablets and smart phones.

Glovius

The collaborative visualization solution, Glovius from HCL Technologies, offers CAD independent viewing and data access. Aptly called a “Modern CAD Viewer” because of its ability to run on an extensive range of platforms including tablets and smart phones, Glovius offers capabilities such as dimensioning, sectioning, markup, 3D compare, and analysis tools to all levels of users. CIMdata recognizes Glovius as a major player in the collaborative visualization market.

Glovius, originally a product of Geometric Limited known for their eDrawings Publishers and CAMWorks solutions, became an asset of HCL Technologies by way of business transfer in 2017.¹ HCL Technologies Limited delivers technology solutions built around digital applications, IoT, cloud, automation, and engineering services for a wide range of industries including aerospace, automotive, industrial manufacturing, healthcare, and energy.

¹ For more information on HCL Technologies' tools and technologies portfolio, see. <https://geometricglobal.com/products-and-technologies/>.

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Multi-CAD Access

One of the more important strengths of Glovius is its ability to import native CAD files from a popular range of CAD systems without the need of a CAD license. Among the many formats it can import are:

- Dassault Systèmes' CATIA V4/V5/V6 and SOLIDWORKS
- Siemens PLM Software's NX and Solid Edge
- PTC's CREO and Pro/ENGINEER
- Autodesk's Inventor

In addition, standard formats STEP (including AP 242), IGES, JT, and STL can be imported. Using the Glovius 2D Viewer, users can view CATDrawings (CATIA 2D drawings), DXF, and DWG files. CIMdata recognizes that with the support of these popular CAD and standard formats, Glovius is positioned well within the design engineering market. Note that once captured by Glovius, CAD data can be exported in 3DPDF, HTML, STL, or Microsoft PowerPoint formats.

Data Accessibility and Interaction

Within Glovius, extensive capabilities are made available to the user. In addition to viewing the 3D product data model using zoom, pan, and rotate, the user can view and search product structures, attributes, and PMI (Part Manufacturing Information) such as GD&T. All the standard 3D view orientations are available as well as perspective. The user can control graphics rendered modes of wireframe, shaded, color, and transparency to better investigate the model.

Especially important for downstream users in the supply chain and manufacturing is the ability to accurately measure the model. The user can generate linear, angular, and radial measurements (Figure 1). A tape measure option is useful in computing the length of a sequence of curves and edges. Surface area of faces can also be calculated.

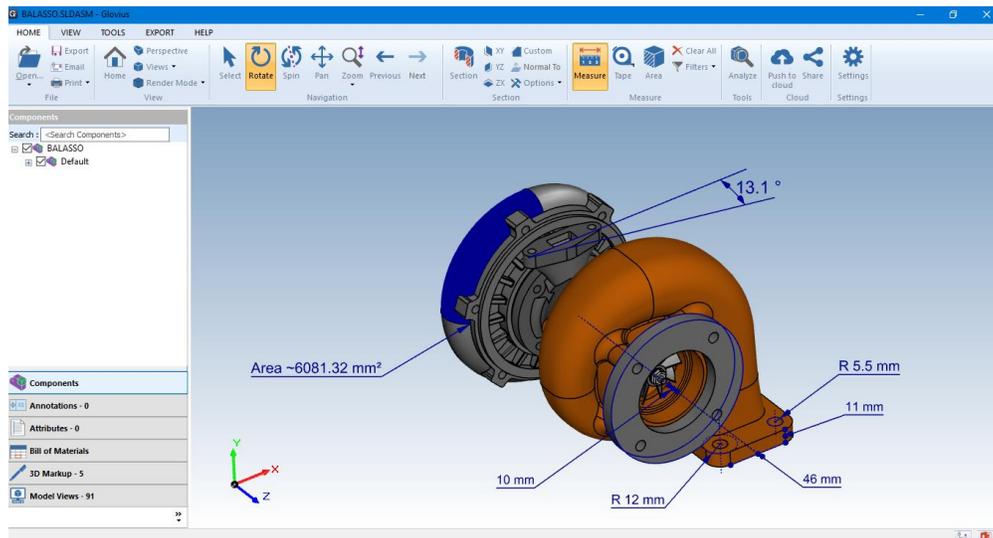


Figure 1—Dimension Measuring within Glovius
(Courtesy of HCL Technologies Ltd.)

Model Exploration

Interaction within Glovius also extends into sectioning. The user can cut dynamic sections along either

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standard or user defined planes (Figure 2). In addition, the user can create multiple sections and improve their visibility by adding crosshatching. CIMdata especially welcomes the ability of Glovius to measure section profiles. The analyze feature in Glovius shows key information about a selected component with a single click. This includes extent dimensions, mass, surface area, volume, center of gravity, and the number of component instances in the assembly. The feature is very helpful for estimating the material required and cost of manufacturing the component which is particularly useful for preparing quotations. Purpose built tools for die casting and injection molding applications include thickness analysis, draft angle measurement, and projected area calculation.

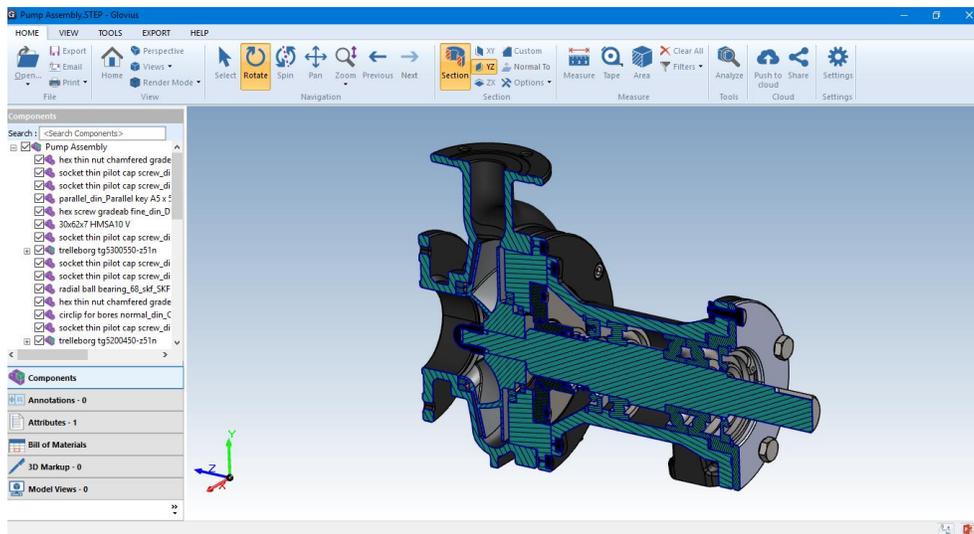


Figure 2—Sectioning within Glovius
(Courtesy of HCL Technologies Ltd.)

Assembly Analysis Tools

Yet another welcome capability is a suite of tools to help users analyze a product’s assembly structure. The user can modify a component’s color and apply transparency. Glovius also has the capability to move components and produce exploded views of an assembly to allow users insight into its construction. One of the more important functions is 3D Compare. During the complex design interaction of new product development, often between OEM and the supply chain, confusion can arise due to the ever changing revisions of product models. 3D Compare allows the user to identify added, deleted, and modified features of parts and assemblies to better understand changes between revisions. CIMdata strongly believes that any visualization solution that does not support 3D Compare would fail in today’s market.

Collaboration Across Devices

While all these capabilities are useful to individual users the primary purpose of Glovius is to be used as a collaboration visualization tool. Its largest impact derives from the ability to annotate and markup the viewed model. Those notes and markups can then be shared with other users. This interaction is most powerful when used between the OEM and a supply chain company to help better understand the models and avoid misinterpretations which can otherwise delay product development and impact costs.

The cross device capabilities of Glovius are very impressive. The “Push to Cloud” feature in Glovius allows users to upload their files to a Cloud based account. These files can then be viewed using a web browser or on mobile devices using the Glovius iOS or Android apps. Users can measure and section

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designs, add markups and annotations, and pass URLs to files for easy sharing. This makes for a seamless collaboration experience between teams located in different locations.

Glovius Desktop also provides options to export files to Image snapshots, PowerPoint, 3DHTML, 3DPDF, and Bill of Materials (BoM) for easy sharing and collaboration.

Summary

Glovius delivers a strong collaborative visualization choice for users looking to improve their data sharing experience during product development. HCL Technologies has positioned it well against the three major business challenges of being cost effective, easy to use, and platform independent. The result places Glovius in the forefront of effective solutions for collaboration visualization. CIMdata recommends that users looking to improve their downstream and supply chain interaction take a look at Glovius as a possible vehicle to drive those improvements.

About CIMdata

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Intelligence Spanning the Lifecycle: SAP Infodays for PLM (CIMdata Commentary)

17 May 2018

Key takeaways:

- *SAP Infodays for PLM's focus on PLM and advances in the portfolio makes it a much more informative event for SAP customers than other venues.*
- *SAP is rapidly enhancing their PLM offering with support for authoring tools spanning the full product lifecycle, enhanced by elements from SAP Leonardo.*
- *Customers are driving this innovation pace, helping define necessary enhancements.*

CIMdata attended the SAP Infodays for PLM event, held in St. Leon-Rot, Germany on 8-9 May 2018. This session brings together SAP customers, primarily from Germany and Central Europe, SAP partners, and SAP staff to highlight on-going developments, strategies, and futures and showcase leading customers' work in developing and deploying SAP's solutions. CIMdata has attended a number of SAP events before but the customer presentations at this event were much more informative than many others heard in the past.

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SAP has been in the PLM market since the phrase was coined.² For many years, mechanical computer-aided design (MCAD) data was referred to as “CAD documents” by SAP. The SAP PLM Alliance, a group of SAP development partners, have worked hard to change that, replacing the old CAD Desktop MCAD interface with the Engineering Control Center (ECTR), which provides a standard framework and look and feel for authoring tool integrations (initially with MCAD). PLM Alliance partners CENIT, CIDEON, DSC, EPLAN, and Triess engineering offer integrations with the leading MCAD solutions, and SAP plans to use the ECTR approach for MCAD, ECAD, and Electronic Design Automation (EDA) integrations. ECTR will be the approach used to support additional integrations, e.g., with simulation and analysis tools. At events, CIMdata often polls the integration partners to understand just how many SAP PLM customers are managing engineering work-in-process data. These discussions at Infodays suggest that interest and implementations are way up.

Over the last several years, SAP has emphasized their planned support for other authoring tools and processes that support engineering work-in-process in other domains besides mechanical design. Just as with MCAD integration, the pace of innovation by SAP to fulfill these needs has increased over the last couple of years. SAP’s product vision for discrete industries is shown in Figure 1. Using intellectual assets and expertise from their Sybase acquisition, SAP has rapidly introduced a solid requirements management offering and tools for 0D and 1D modeling. Their requirements management offering supports the ReqIF interchange format and traceability to functional and logical models. Going forward, SAP will need to support full traceability to mechanical, electrical/electronic, and software components, as will their PLM competitors claiming to support model-based systems engineering. The Open Services for Lifecycle Collaboration (OSLC) specification is one option for enabling this capability.

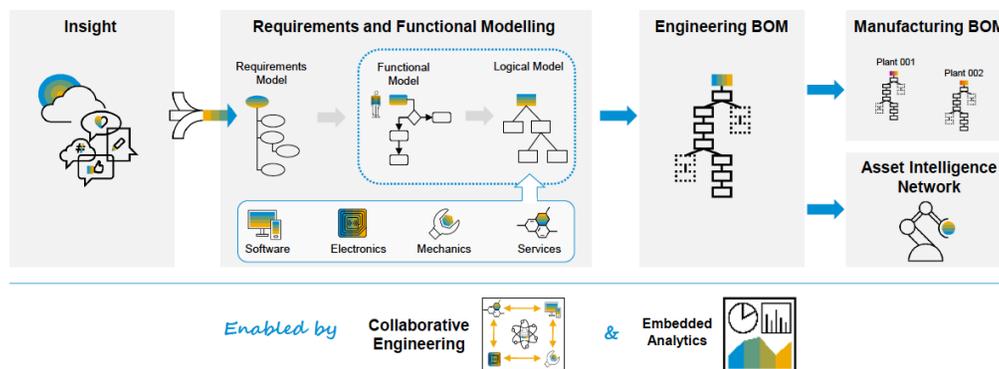


Figure 1—SAP’s Product Vision for Discrete Industries
(Image Courtesy of SAP)

This broader product vision is necessary to support developing and deploying smart connected products and to support Industry 4.0, originally Industrie 4.0 in Germany. SAP was a key player in helping to define Industrie 4.0³ and helping their lead customers reach that vision, often leveraging the use of smart connected products. One defining aspect of that vision is the ability to quickly reconfigure global value chains “with App Store simplicity.”⁴ SAP plans to meet this need by supporting commerce networks

² SAP was one possible source for the phrase, but Dassault Systèmes and IBM are also mentioned as defining PLM.

³ SAP was part of the team that worked with the German government, academia, industry, and Germany’s labor unions that defined Industrie 4.0, and continues to play a key role in a range of related initiatives in Germany and around the world.

⁴ Recommendations for implementing the strategic initiative INDUSTRIE 4.0, Final report of the Industrie 4.0 Working Group.

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using technology based on Ariba, their 2012 acquisition.⁵ Ariba was a leader in cloud-based business commerce. Figure 2 shows how SAP is evolving to span the lifecycle and value chain. Elements of SAP Leonardo like the Internet of Things (IoT) and analytics are helping customers like KAESER KOMPRESSOREN change their business model from selling or leasing equipment to providing “Compressed Air 4.0.” Their Sigma Smart Air architecture relies on SAP Leonardo IoT, with Smart Asset Management enabled by SAP Manufacturing Execution and the SAP Asset Intelligence Network. Companies that used to buy or lease KAESER equipment now purchase the needed compressed air at a pre-agreed price per cubic meter.

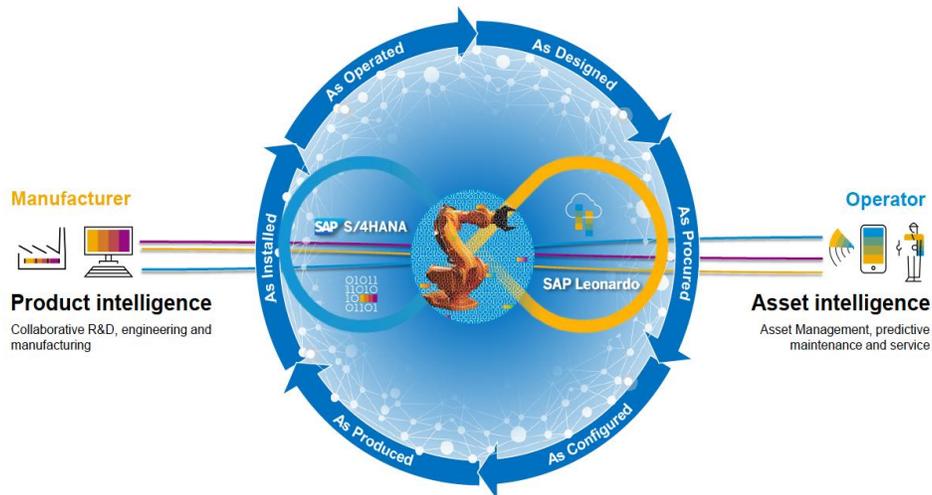


Figure 2—Spanning the Lifecycle and Value Chain
(Image Courtesy of SAP)

SAP’s vision also relies on another hot PLM related topic: the digital twin. Many providers in the PLM market are promoting their support for digital twins, but while they are using the same phrase, each company means something quite different. These differences are partly a function of how much of the full lifecycle, from idea through life, is supported by that company’s offerings (and those of their partners). SAP’s historical strength was management after the product was defined, i.e., from enterprise resource planning through manufacturing and into the field. SAP PLM pushed them upstream, and with their recent enhancements and planned roadmap they are working to cover the engineering work-in-process space for mechanical, electrical/electronic, and software components. As discussed above, they are also working to support requirements and model-based systems engineering use cases. SAP’s digital twin vision, shown in Figure 3, includes a network of twins spanning the lifecycle from digital prototypes in the digital world, to twins in production, installation, and operation. This broad vision is similar to the approach described by Siemens PLM Software.

⁵ <https://news.sap.com/sap-to-expand-cloud-presence-with-acquisition-of-ariba/>

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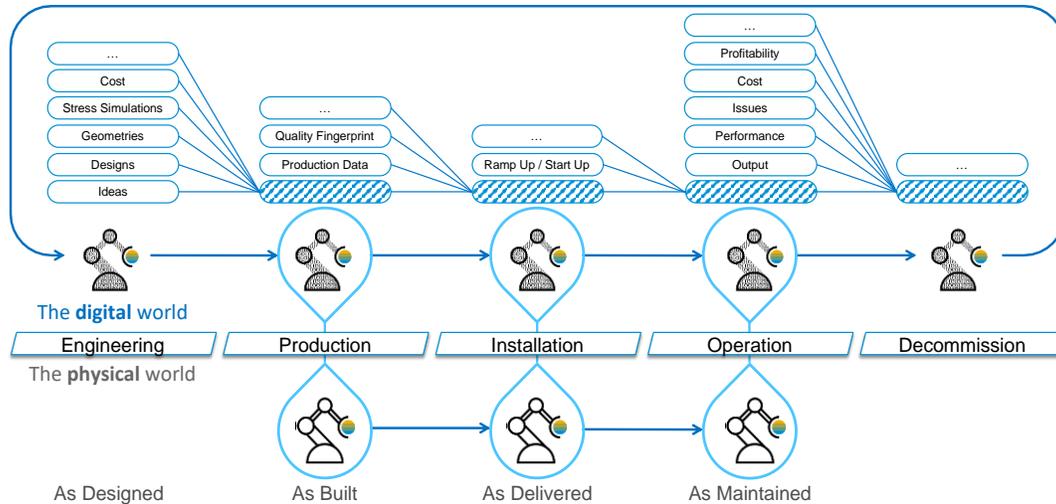


Figure 3—SAP Envisions a Network of Digital Twins
(Image Courtesy of SAP)

SAP Visual Enterprise, leverages their Right Hemisphere acquisition and gives them solid visualization and digital mock-up capabilities (DMU) to support this critical aspect of digital twins. One Infodays session highlighted how an SAP customer plans to use SAP's variant configuration capabilities to support complex multi-CAD DMU sessions. SAP can also use this to support augmented reality use cases important for in-service applications.

Day 2 of SAP Infodays focused more on SAP futures. While these topics are under non-disclosure, given where SAP is and where they plan to go as described in this commentary, many of the topics could be readily inferred.

One thing driving the rapid innovation pace is SAP's move to S/4HANA, their in-memory database offering, and the SAP Cloud Platform. SAP unveiled their cloud strategy in 2012⁶ and in their last fiscal year, cloud revenues were 16% of their total revenue. SAP has adopted a "cloud first" development strategy. What this means in practice is that new cloud releases emerge quarterly. For on-premise customers, SAP is packaging up the four quarterly cloud releases into one annual update. They are supporting a range of deployment options, with SAP S/4HANA available on-premise, Infrastructure as a Service (IaaS) from SAP and partners, and on private and public clouds. According to SAP, their SAP PLM offering is available on the cloud today.

In conclusion, the SAP Infodays for PLM event was an incredible source of information on SAP's status and roadmap, and a showcase for leading customers. While this commentary focuses on discrete products, SAP's vision for formulated products is equally as expansive and is being worked just as hard. Their leading customers are reaching aspects of Industry 4.0 with some, like KAESER, almost completely driven by SAP offerings. As with their earlier offerings, SAP is developing "rapid start" packages to minimize time to value for their customers. CIMdata was impressed with the depth and breadth of their current offering, and with their expansive roadmap. SAP is being driven to these innovations by their lead customers and are showing some great results to date. They face a strong market challenge to increase adoption of SAP PLM for engineering work-in-process use cases, as many of their discrete customers have well-entrenched solutions from SAP's competitors. But the vision shown at Infodays illustrated how they plan to "play nicely with others" and to position SAP to provide

⁶ <http://news.sap.com/sap-unveils-accelerated-cloud-strategy/>

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team data management (TDM) functionality surrounded by their PLM offerings. If they can replicate the success illustrated at the SAP Infodays event across a wider swath of their global customers it will be a great start.

About CIMdata

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PLM Road Map North America 2018

17 May 2018

CIMdata, Inc., the leading global PLM strategic management consulting and research firm, announces the successful completion of PLM Road Map North America 2018. The theme for the event was *Charting the Course to PLM Value Together: Expanding the Value Footprint of PLM and Tackling PLM's Persistent Pain Points*. The event took place at the Tysons Corner Marriott, near Washington, Dulles. 2018 marks the 25th year that PLM Road Map has been in operation.

The event comprised presentations made by PLM users representing several industry verticals interleaved with short vignettes about key topics of interest presented by the sponsors of the event.

Speakers and their presentation topics included:

- The State of the PLM Industry: Why the C-Suite is Not Happy - *Peter Bilello, President, CIMdata, Inc.*
- Value Creation through Synergies between PLM and Digital Transformation - *Daniel Dubreuil, CDO for Products and Service, Safran*
- MBSE: The Digital Evolution of Systems Engineering - *Mark Williams, Engineer and MBSE Project Leader, The Boeing Company*
- MBSE Means Many Models - Managing the Risk and Keeping Records - *Nigel Shaw, Eurostep Limited*
- Industrialization of Additive Manufacturing - *Peter Kerl, Moog*
- Blockchain & PLM - *James van Oss, Moog*
- Rip & Replace or Embrace & Extend to Enable a PLM Platform - *Boris Cononetz, Jr., Director, Enterprise PLM, Microsoft*

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- Influencing Standards for Data Storage and Exchange – *Brian Chiesi, BCA Business Capabilities, Boeing Commercial Airplanes*
- Agile PLM Development - *Antoine Scotto d'Apollonia, Vice-President - IM Develop, Airbus*
- System of Systems Approach to Product Design - *Professor Dr.-Ing. Martin Eigner, Chair of Virtual Product Engineering, The Technical University of Kaiserslautern*
- The State of PLM on the Cloud - *Stan Przybylinski, Vice President, CIMdata, Inc.*
- Generative Design: A New Era of Product Development - *Dr. Ted Blacker, Manager, Simulation Modeling Sciences, Sandia National Laboratories*
- Sustainable PLM Overcoming Obsolescence - *Dr. Henrik Weimer, Head of Business Architecture and Planning, Airbus*
- Challenges and Approaches to Implementing Structured System Architecture in the Medical Device Industry - *Sumit Gupta, Director, Engineering Head of PLM Systems, Tools and Infrastructure, Siemens Healthineers*
- Model-based Definition and Minimum Digital Thread - *Melissa Harvey, The Boeing Company*
- Physics-based Digital Twins: Beyond Data Analytics - *SDSD Knowledge Council Round Table chaired by CIMdata*
- PLM's Future: Where are we going? - *Peter Bilello, President, CIMdata, Inc.*

The PLM Collaboration Cafe™, provided a vibrant environment for open discussions among the attendees and the sponsors of the event. Sponsors were: Aras, Configit, Eurostep, IpX, Mercury Digital Services, and Siemens PLM Software.

For more information on PLM Road Map North America visit:

<https://www.cimdata.com/en/education/plm-conferences/2018-plmrmna-pdt/2018-plmrmna-about-plmrm>. The next PLM Road Map event will take place in Stuttgart, Germany on October 24, 2018.

About CIMdata

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CIMdata works with both industrial organizations and providers of technologies and services seeking competitive advantage in the global economy. In addition to consulting, CIMdata conducts research, provides PLM-focused subscription services, and produces several commercial publications. The company also provides industry education through PLM certificate programs, seminars, and conferences worldwide. CIMdata serves clients around the world from offices in North America, Europe, and Asia Pacific. To learn more about CIMdata's services, visit our website at www.CIMdata.com, follow us on Twitter: <http://twitter.com/CIMdataPLMNews>, or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA, Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV

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Product Data Intelligence (CIMdata Commentary)

15 May 2018

Key takeaways:

- *Actify's solutions enrich and complement existing enterprise environments, such as PLM and ERP, by bridging information silos to provide informed analysis of disparate data, providing product data intelligence.*
- *The Actify suite works both within enterprise environments and as a standalone solution that provides an intelligent, visual-based view into product information.*
- *The solutions are deployed as a service and priced by the size of the user community.*

Common Data Intelligence Issues

Discrete manufacturers of all sizes share a data problem: How to maximize value from all of the information that is available about products and services? This issue manifests itself throughout product lifecycles: during the product innovation process as well as after products are placed in service.

Sharing product data in the enterprise in meaningful ways that unlock insight and support collaboration, efficiencies, and cost reduction is critical to expanding data's worth. The more that data is shared and reused, the more value is extracted from it and the higher the benefits for companies such as being faster, better, and cheaper at producing products. However, many barriers to sharing information exist because companies have created siloed data sources that are difficult to find and access.

What organizations want is to be able to have easy, shared access to information without replacing their current product data sources and systems, and complimentary to existing PLM and other enterprise solutions. This requires flexible integrated access across current environments of solutions and data stores.

The bottom line is that organizations, regardless of size, have a massive data opportunity that remains unfulfilled. An opportunity that can be resolved by systematic and effective use and dissemination of product data intelligence—that will unlock significant operational benefits. CIMdata believes that a good solution will reinforce competitive advantages and that having only a 'good enough' approach to PLM solutions will result in unnecessary problems, lack of user adoption for the more complex technologies, and minimize the potential benefits.

What Companies Need

Companies create product information in a number of forms: CAD models, drawings, documents, analysis results, specifications, and many others. When the product data can't be viewed in the context of the product design, then it becomes very difficult to understand it properly and extract intelligence from it. Thus, it is imperative to have a way of viewing and examining data in the richest context possible—visually, directly associated with the components of the product's design. That is, using the CAD models and drawings as the context for viewing and navigating through the data.

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Nothing can be leveraged, collaboratively or individually, if it can't be readily found. So, product information needs to be accessible from wherever in the organization it is stored and managed. This is the typical role of product data management (PDM) solutions, but not every product development organization has a PDM, or they have one that is not fully adopted by users, or they have several across which the data is not linked and synchronized. More likely, in CIMdata's experience, product information storage is done inconsistently, with lots of data residing in disparate repositories and shared folders. Thus, proper, consistent access to information can be a burden for many organizations. Establishing and managing a single data repository, while a fine goal, requires substantial resources that an organization may not possess. However, the need for consistent access does not diminish just because the "best" solution is not easily attained. It remains a fact that you can't collaborate on what you can't find. Given this, having tools that help access, view, and manage information gathered from across the enterprise is essential.

Another major problem for organizations is how to present information in ways that make it easy to understand and that are tailored to the particular needs of the recipients. The solution is to have straightforward and easy ways to generate reports from the disparate data sources mentioned above. To do this, users have to be able to search and sort data to find what they need to report on, and they have to have a way to build repeatable as well as ad-hoc reports that can automatically be populated with data of interest. It is important that reports remain linked to their data sources so that as data changes throughout the product lifecycle, the reports can be regenerated without the burden of manually re-discovering the current state of the data contained in the reports.

Actify provides a suite of solutions that are targeted at helping companies mitigate the issues described above.

The Actify Solution Suite

The Actify offering is built on a product data platform that they call Centro. Centro provides the main aspects that CIMdata expects to find in a product data intelligence platform—that is, data and process management, data aggregation from multiple sources, data linking, attributes and metadata capture, search and find mechanisms, data visualization, integration of applications and data sources, reporting, security, and administration. Figure 1 illustrates the Actify Centro platform and surrounding capabilities in the Actify solution.



Figure 1—The Actify Solution Platform
(Courtesy of Actify)

There are several tools in the suite, as shown in Figure 2. Tools that integrate information silos,

CIMdata PLM Industry Summary

automate mundane processes, are easy to use for periodic users, and enable innovation through user collaboration and more effective use of data. They provide scalable solutions that support:

- Enterprise CAD viewing (2D, 3D, lightweight)
- File sharing
- File and data management
- Data discovery
- Business tools for analytics and reporting
- Product data intelligence



Figure 2—The Actify Solution Landscape
(Courtesy of Actify)

Their original product, SpinFire (including SpinFire Web), is based on the Centro platform and provides visualization and reviewing of 2D and 3D CAD and related information.

Actify provides bespoke dashboards for dynamic reporting. Reports are customizable to support the unique requirements and process of each user. Data can be reported against the viewable geometry as well as in tabulated reports. All reports can be viewed on-screen or printed.

Pipeline Manager monitors information in the context of processes and automates tasks. It controls changes and provides notifications of activities requiring action or that have been completed. Users can subscribe to processes and data, so they automatically are notified when changes occur. Process definitions can apply business rules to data to assure it is developed in appropriate ways.

Data synching across processes and data in applications provides essential linking that helps users find information related to other data, such as finding the process that was used to create a particular data item, or finding manufacturing information for a part or assembly.

Much like other PDM solutions, Actify has a distributed architecture that provides local storage with global access based on a central catalog of the data. Users enter the data repositories' catalog to find the information or file they are looking for and it is delivered to them regardless of the location in which the data is stored.

Actify's primary products are:

- SpinFire—a 3D and 2D data viewer that allows users to see and investigate models, drawings, and documents regardless of what solution in which the information was developed. SpinFire can access data from all the popular CAD systems.
- Centro—provides enterprise data management. It stores information about where data is stored and who can access it. It allows users to search data by attributes and 3D model shape search. Centro provides a centralized data viewing platform on which end-user capabilities are built.
- Actify business tools—provides reporting, data mash-ups, visual data delivery analytics, and other report generation capabilities.

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Actify provides its products as SaaS (Software as a Service) so deployments should be both rapid to achieve and flexible to configure.

Conclusions

Actify has been in the information discovery and visualization business for many years. They continue to enrich and add to their suite of tools and processes to enhance how people extract intelligence from their product data regardless of the data's source. Their solutions' abilities to coexist in and augment the enterprise environments of their customers are strong and compelling reasons to consider their solutions to support being able to improve product data intelligence. Actify's pricing model that provides solutions as a service is also quite compelling. CIMdata believes that organizations who are trying to extract more information from their data should consider Actify as a solution provider.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.

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Acquisitions

Acquisition of FluiDyna Accelerates Altair's Computational Fluid Dynamics Technology

10 May 2018

[Altair](#) has acquired Germany-based [FluiDyna GmbH](#), a renowned developer of NVIDIA CUDA and GPU-based Computational Fluid Dynamics (CFD) and numerical simulation technologies in whom Altair made an initial investment in 2015. FluiDyna's simulation software products ultraFluidX and nanoFluidX have been available to Altair's customers through the Altair Partner Alliance and also offered as standalone licenses.

ultraFluidX solves large-scale internal and external aerodynamics problems for a broad class of applications including ultra-fast prediction and evaluation of vehicle, building, and environmental aerodynamics. The software is based on the Lattice Boltzmann Method, providing users with superior performance and dramatically reducing the model preparation time for large, complex models. The integrated volume meshing and fast transient analyses deliver short turnaround times, resulting in completely new possibilities for simulation-driven design and significant cost savings.

nanoFluidX is a fluid dynamics simulation tool based on the smoothed particle hydrodynamics method

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to predict the flow in complex geometries with complex motion. For example, it can be used to predict the oiling in powertrain systems with rotating shafts and gears, and analyze forces and torques on individual components of the system.

James Scapa, Founder, Chairman, and CEO at Altair said, “We are excited about FluiDyna and especially their work with NVIDIA technology for CFD applications. We believe the increased throughput and lower cost of GPU solutions is going to allow for a significant increase in simulations which can be used to further impact the design process.”

“We’ve worked closely for more than 10 years with FluiDyna, an Elite Solution Provider in our NVIDIA Partner Network Program,” said Shanker Trivedi, Senior Vice President of Enterprise Business, NVIDIA. “Together, we’ve helped develop forward-thinking simulation tools that leverage NVIDIA technology for better performance and efficiency throughout the design process.”

In addition to continued growth and development of current FluiDyna products, the acquisition is intended to help the complementary technical teams of both organizations accelerate Altair’s broader offerings in CFD.

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Oracle Buys DataScience.com

16 May 2018

Oracle today announced that it has signed an agreement to acquire DataScience.com, whose platform centralizes data science tools, projects and infrastructure in a fully-governed workspace.

Data science teams use the platform to organize work, easily access data and computing resources, and execute end-to-end model development workflows. Leading organizations like Amgen, Rio Tinto, and Sonos are using the DataScience.com platform to improve productivity, reduce operational costs and deploy machine learning solutions faster to power their digital transformations.

DataScience.com empowers data scientists to deliver the business-changing insights executives expect in less time with self-service access to open source tools, data and computing resources, while also improving the ability of IT teams to support that work. Oracle embeds Artificial Intelligence (AI) and machine learning capabilities across its software as a service (SaaS) and platform as a service (PaaS) solutions, including big data, analytics and security operations, to enable digital transformations. Together, Oracle and DataScience.com will provide customers with a single data science platform that leverages Oracle Cloud Infrastructure and the breadth of Oracle's integrated SaaS and PaaS offerings to help them realize the full potential of machine learning.

"Every organization is now exploring data science and machine learning as a key way to proactively develop competitive advantage, but the lack of comprehensive tooling and integrated machine learning capabilities can cause these projects to fall short," said Amit Zavery, Executive Vice President of Oracle Cloud Platform, Oracle. "With the combination of Oracle and DataScience.com, customers will be able to harness a single data science platform to more effectively leverage machine learning and big data for predictive analysis and improved business results."

"Data science requires a comprehensive platform to simplify operations and deliver value at scale,"

said Ian Swanson, CEO of DataScience.com. "With DataScience.com, customers leverage a robust, easy-to-use platform that removes barriers to deploying valuable machine learning models in production. We are extremely enthusiastic about joining forces with Oracle's leading cloud platform so customers can realize the benefits of their investments in data science."

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Company News

Accenture Delivers Digital Asset Management Program to Help Shaanxi Electric Boost Performance and Reduce Operating Costs

13 May 2018

State Grid Shaanxi Electric Power Company (Shaanxi Electric), which constructs and operates electric power grids in China's Shaanxi province, and Accenture have developed and launched a new digital asset management system that collects and gives the electric company access to all asset life cycle information in a single tool, enabling it to glean predictive insights for improved real-time decision making.

Targeted benefits include lower capital and operational costs, reduced risk to people and assets, and enhanced operational performance.

As part of the project, Accenture designed, developed and implemented the digital life cycle asset management system, based on the internet of things (IoT) and mobile technologies. The system connects, integrates and analyzes data from numerous devices – such as transformers, circuit breakers, relays and other grid assets – across their full life cycle.

Onsite workers use mobile devices to communicate with RFID tags fixed to equipment for any operation, which collect large amounts of operational data. Mobile applications developed by Accenture in collaboration with Shaanxi Electric support this process and focus on several key areas, including supplies receipt and distribution, infrastructure installation and testing, equipment inspection, and asset verification. Accenture also helped Shaanxi Electric move these applications from a local server to a private cloud environment.

In the back office, this data can be analyzed through an IoT-based platform, developed by Accenture, that uses advanced predictive analytics to generate insights, enabling real-time asset health and performance management to improve productivity. The new system should also help Shaanxi Electric better track purchase orders, calculate construction costs and record maintenance logs.

“We are very happy to be working with Accenture to implement this new digital asset management system, and we’re confident it will not only help us achieve significant maintenance cost savings, but also boost performance to enable us to better serve our customers,” said Genzhou Zhang, deputy chief information officer of Shaanxi Electric. “The new solution will provide us with better service quality, due to increased power supply stability and fewer outages, driven by improved device operation performance.”

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Doreen Deng, a managing director in Accenture's Resources practice in Greater China and client account lead for Shaanxi Electric, said, "This project will help Shaanxi Electric take advantage of [Industry X.0](#) technologies to lead asset management into a new digital era. This will fundamentally transform how Shaanxi Electric manages maintenance performance, enabling real-time decision making based on predictive insights."

Accenture was selected by Shaanxi Electric for its industry experience, expertise in successfully delivering enterprise asset management programs globally, and an innovation-led approach. This is backed by Accenture's global portfolio of more than 6,000 patents and applications.

To develop the digital asset management system, Accenture leveraged its local delivery network in Beijing and Shanghai.

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COMSOL News: Multiphysics Modeling and Simulation Apps Inform Better Business and Engineering Solutions

7 May 2018

COMSOL, Inc. published the annual edition of COMSOL News today. The magazine features case studies of simulation specialists working with their colleagues and customers to find solutions that can satisfy both business and engineering goals. Enabled by high-fidelity multiphysics models of the products they want to design and a culture of collaboration with the convenience of simulation apps, engineers are pushing the limits of technology while reducing the need for physical prototypes. COMSOL News 2018 reports on how creating accurate digital prototypes and deploying simulation apps has become standard practice among industry leaders.

Justin McKennon, who leads the Modeling and Analytical Team at NTS Pittsfield, said "Time is money in our industry, and our customers are very pleased with the service we're able to provide thanks to our multiphysics modeling capabilities. In fact, some customers are so confident in the validity of our simulations that they've begun to make wholesale business decisions based solely on our results." NTS is a world leader in the design and validation of sophisticated lightning protection systems for the aerospace industry, including aircraft, space vehicles, and launch facilities.

COMSOL News 2018 features more than a dozen articles covering a diverse range of projects making use of multiphysics modeling and apps distributed through organizations' internal portals. Featured articles discuss: biopharmaceutical processes, minimizing corrosion in multimaterial assemblies, gear lubrication, automotive product design, semiconductor manufacturing breakthroughs, enhancing water quality, and developing noncontact magnetic couplings.

"Numerical simulation impacts every aspect of the world around us. Keeping the environment clean is one important example. Our cover features the Dommel river in The Netherlands, which is thriving thanks to the engineers at Tauw and their simulation work," says Valerio Marra, marketing director, COMSOL, Inc. "The simulation specialists featured in this year's edition of COMSOL News are making the world a better place. They don't do it alone though, engineers across departments and continents are working together to solve the challenges that remain in building better products and processes."

Availability

COMSOL News 2018 is available as an online magazine and can be viewed digitally or downloaded in PDF format at: www.comsol.com/offers/comsol-news-2018.

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New home for Dassault Systèmes at University of Adelaide

15 May 2018

[Dassault Systèmes](#) and the [University of Adelaide](#) have further strengthened their strategic partnership with the announcement that Dassault Systèmes will establish its South Australian regional center on campus at the University.

Dassault Systèmes will create a new Adelaide-based team comprising staff from France and India, and will host University of Adelaide interns at its Adelaide operations.

The South Australian regional center – the first Dassault Systèmes office to be established at an Australian university – will be embedded in one of the flagship engineering buildings on the University's North Terrace campus.

"The colocation of Dassault Systèmes in the heart of where we conduct engineering teaching and research will provide a deeper link between the University of Adelaide and a global industry leader," says the University's Vice-Chancellor, Professor Peter Rathjen.

"Our growing partnership with Dassault Systèmes means that our engineering students will have further opportunities to develop industry-ready skills, enabling them to serve the defense sector in South Australia.

"This signals a new era of industry engagement for our University, helping to prepare our graduates for the transformation of the South Australian economy," Professor Rathjen says.

Mr Masaki Sox Konno, Dassault Systèmes' Managing Director for Asia Pacific South, says: "With South Australia preparing for major defense contracts, including the Future Frigates and Future Submarines programs, we see a critical role for Dassault Systèmes in providing solutions for defense and other industries in this State.

"We are delighted to be establishing our South Australian regional center at the University of Adelaide. Dassault Systèmes and the University share many joint interests, such as in STEM education, defense, Smart Cities, mining, energy and agriculture."

Dassault Systèmes has served the defense sector for more than 30 years and is known for its real-world tools and software, such as the 3DEXPERIENCE platform and Virtual Shipyard Training Program.

In 2017, the University of Adelaide and Dassault Systèmes signed an agreement to implement a specialised industry-focused curriculum for engineering students.

"Our partnership with Dassault Systèmes is a perfect example of what can be achieved through international collaboration to co-create the workforce of the future," says the University's Deputy Vice-Chancellor (Academic), Professor Pascale Quester.

"Where better to see that partnership thrive and grow than right on our campus, helping to prepare

CIMdata PLM Industry Summary

students for the technology-led work environments of the future."

Mr Masaki Sox Konno says his organisation is delighted with the growing collaboration with the University of Adelaide.

"We look forward to a long and fruitful partnership with the University and the opportunity to potentially open the door to more global opportunities for South Australian students."

The new Dassault Systèmes office is expected to open at the University of Adelaide later this year.

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Projetech, INC Promotes Debbie Herbers to President & Chief Operating Officer

14 May 2018

Projetech, IBM Gold Business Partner and leading global provider of IBM Maximo as a Service, today announced the promotion of Debbie Herbers to President and Chief Operating Officer. She will have the primary responsibility of leading the operations of Projetech's technology solutions.

"Debbie has been a key part of our success, and in acknowledging her outstanding contributions we are thrilled to promote her to this important position. Debbie will secure the effective operation of our business to drive extensive and sustainable growth," said Steve Richmond, Founder and CEO of Projetech. Richmond will remain in his current capacity as CEO of Projetech.

Mrs. Herbers joined the company in 1996 and quickly rose to several supervisory and management positions. Mrs. Herbers was previously with Cincinnati Public Schools in its computer services group.

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PTC Continues Competitive Momentum with New and Expanded Creo Customers

17 May 2018

PTC today announced numerous companies have selected and continued to expand their use of the [Creo](#)® suite of computer-aided design (CAD) software instead of competitive solutions. To improve their product design and innovation processes, organizations large and small rely on PTC's CAD software for its ease of use, simplicity, and reliability.

Creo helps these and other companies more easily close the gap between the physical and digital worlds by capitalizing on new capabilities and technologies like augmented reality (AR), Internet of Things (IoT), topology optimization, computational fluid dynamics, and more. CAD data is the foundation for the digital twin, a digital record of each product's designed, manufactured, service, and real-world state. Comprised of the digital definition of the product and the physical experience of the asset in the field, this new technology enables manufacturers to envision new products that better meet customer needs, as well as develop business models to better market and sell the product to customers.

For the past two fiscal years, and for the first half of fiscal year 2018, PTC's CAD bookings grew double-digits, far outpacing market growth. This continued momentum is exemplified by the following sampling of organizations that recently switched to or expanded their usage of the PTC Creo suite:

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- [CAME](#), a leading multinational company that provides integrated technology solutions for automated home, building, and urban environments, will implement PTC's Creo software.
- [Cramasie](#), an award-winning product design and development consultancy that blends industrial design and mechanical engineering to create innovative products, replaced their existing CAD solution with Creo.
- [Dexprom](#), a Portuguese company that produces large and complex molds for the automotive industry, along with packaging, home appliances and garden products, will expand their use of Creo.
- [ProtonVDA](#), a clinical proton radiography system with a design that is compact, monolithic and scalable to large field sizes, has made the switch to Creo.
- [Volkswagen](#), a worldwide, leading automobile manufacturer and the largest carmaker in Europe, expanded their Creo footprint.

“With Creo, it’s simple for customers of all sizes and industries to transform an early design concept into a smart, connected product,” said Brian Thompson, SVP and general manager, CAD, PTC. “These companies, ranging from a well-known automobile manufacturer to an automated home and building solution provider, all recognized the potential of Creo to give them a true competitive edge, and PTC is eager to support their journey and outcomes.”

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SAIC Breaks Ground on New Platform Innovation Center in South Carolina

11 May 2018

Science Applications International Corp. announced today that it is constructing a new platform integration and engineering center in Berkeley County, South Carolina. Slated to be open later this year, the new Platform Innovation Center will be an expansion of SAIC's operations in the Charleston region and will add approximately 200 jobs over the next five years, further supporting economic growth.

“SAIC has a long legacy of doing business in South Carolina and this investment underscores our long-term commitment to the state,” SAIC CEO Tony Moraco said. “We are excited about the new opportunities this state-of-the-art facility will provide and to better enable us to deliver mission critical solutions to our customers. We appreciate the strong support from Governor Henry McMaster, the City of Hanahan, Berkeley County, and the Charleston Regional Development Alliance to bring this important resource to the state.”

This investment is directly tied to the expansion of the company's work involving systems engineering, ground tactical vehicles, logistics, and full life-cycle services and solutions. It is a critical component of SAIC's long-term strategy.

SAIC will lease the facility from West-Signal Capital in connection with the development of a 340,000 square foot build-to-suit facility within the North Pointe Industrial Park.

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SimScale Welcomes SolidWorks Veteran, Vajrang Parvate, as VP of Engineering

14 May 2018

[SimScale](#) today announced a new addition to its executive team. Vajrang Parvate, expert in computer-aided design (CAD) and seasoned engineering leader, has joined SimScale as Vice President of Engineering. Boston-based Vajrang Parvate will be responsible for guiding and growing SimScale's engineering team as well as for the development and delivery of the engineering roadmap.

"SimScale is on the cutting edge of the cloud revolution for simulation technology," said Parvate. "I'm very honored and excited to join SimScale and be able to work with such a dynamic team of smart, driven and motivated individuals."

With over 20 years of experience in engineering organizations, Vajrang most recently served as Vice President of Software Engineering at Ipswitch, where he led a team that developed and released flagship products based on Network Performance Monitoring and Diagnostics (NPMD) domains. Before joining the Ipswitch team in 2015, Vajrang spent seventeen years with SolidWorks in various roles. During his most recent time at SolidWorks, he served as the Head of R&D, managing a team of more than 120 engineers globally and contributing to SolidWorks reaching ~€600M in revenue in FY 2014.

"Vajrang's experience leading global engineering and product teams will accelerate SimScale's delivery of innovative features for its simulation services," said Albert Wenger, Managing Partner at Union Square Ventures and Board Member of SimScale.

Vajrang holds two issued patents and was awarded Patents Forwards Award in 2014 and 2010 by Dassault Systemes. In 2014, he was also serving as the Member of the Board of Directors at Open Design Alliance—a non-profit organization dedicated to creating Software Development Kits (SDKs) and libraries for easy development of engineering applications.

"Since SimScale's inception, we've taken cloud-based simulation from an idea to a production-ready technology, being used by thousands of engineers for design projects ranging from electronic components over vehicles to tunnels and buildings. With the fundamental technology in place, we'll expand SimScale's capabilities aggressively to further accelerate growth across industries and regions." said David Heiny, CEO and Co-founder of SimScale. "Having built engineering software used by millions of engineers, Vajrang brings a unique wealth of experience to guide our engineering team on this path. I couldn't be more excited about Vajrang joining the team in this next growth phase helping to realize SimScale's vision."

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Spinnaker Support Appoints New Asia-Pacific Operations Executive

16 May 2018

Spinnaker Support, a provider of Oracle and SAP third-party support, today announced the appointment of Jae Sam (JS) Lee as Vice President of Asia-Pacific Support Operations. Based in Seoul, Mr. Lee will assume responsibility for regional expansion, service delivery, and customer satisfaction. Spinnaker Support currently supports 141 clients with headquarters or operations in the Asia-Pacific region.

Mr. Lee most recently served as Vice President and Head of Maintenance Go-to-Market for SAP Korea, leading strategies designed to support customer operational excellence while driving their digital

transformation and innovations. JS was responsible to protect and grow SAP support revenue.

Mr. Lee was the first employee of SAP Korea, where he established the legal entity in 1995. He took over the business in 2008 and since has contributed in establishing and growing Maintenance Go-to-Market businesses in China, Taiwan, and Hong Kong. Prior to joining SAP, Mr. Lee served in senior level Finance and HR positions with Monsanto and Motorola.

"Digital transformation is inevitable and there's no need for organizations to continue to overpay for on-premise support, whether they run SAP or Oracle," said JS Lee. "I chose Spinnaker Support over other options because I believe they are best positioned to address current and future support demand in emerging Asia-Pacific markets."

"We've enjoyed tremendous success in Korea over the past year. JS is the ideal choice to lead our Asia-Pacific operations through the next growth stage and to effectively communicate our unique value proposition to the progressive CIOs in the region," stated Matt Stava, CEO at Spinnaker Support.

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Events News

Aviation Week Network Announces Aviation Week DefenseChain Conference to be Held With 2018 Program Excellence Awards Banquet, October 23-24, 2018

17 May 2018

Aviation Week DefenseChain Conference, produced by Aviation Week Network, returns October 23-24 to provide aviation industry professionals with information and updates on defense budgets, program execution and business opportunities, as well as a view of the current supply chain, new requirements from the Pentagon and managing new technologies. This year's conference incorporates the Aviation Week Program Excellence initiative, sponsored by Siemens PLM Software.

This Aviation Week Network event will be held at The Ritz-Carlton Tyson's Corner in McLean, VA. To register and learn more, visit [conf.events/DCPE](#). DefenseChain is an interactive Conference known for the discussion that takes place among delegates, keynote speakers, panel members and other presenters.

The two-day DefenseChain Conference is designed for leaders and decision-makers from primes to Tier 2 suppliers in the defense industry, including strategic planning and business development leaders, program and project managers, supply chain executives, market analysts, investment bankers and financial institutions.

This year's conference incorporates the unique Aviation Week Program Excellence initiative, an industry-led process to identify lessons learned, best practices, and to honor leaders who are setting the standard for performance excellence. On day two of DefenseChain, attendees will hear about changes in Defense Department acquisition plans, technology requirements for the future and lessons learned/best practices for program and project execution. The day will culminate with the annual Program Excellence Awards Banquet where industry highlights the best among it.

In addition to suppliers and prime contractors from around the globe, the banquet includes members of the Program Excellence Evaluation Team: The Boeing Co., Elbit Systems of America, General Atomics

CIMdata PLM Industry Summary

Aeronautical Systems Inc., Honeywell Aerospace, Lockheed Martin Corp., Moog Inc., Northrop Grumman Corp. and Rockwell Collins.

Aviation Week DefenseChain Conference and 2018 Aviation Week Program Excellence Awards Banquet are sponsored by Boeing, CPI Aerostructures, Elbit Systems, General Atomics Aeronautical Systems Inc., Honeywell Aerospace, Kellstrom Defense Aerospace, Lockheed Martin Corp., Moog Inc., Northrop Grumman Corp., Raytheon, Rockwell Collins, Siemens PLM Software & TBL Strategy.

For information about registering, promotional and advertising opportunities, contact Joanna Speed at +1-424-465-6501 or jspeed@speednews.com.

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IEEE – 13th System of Systems Engineering Conference - SoSE 2018 Paris, France, June 19-22, 2018

17 May 2018

Call for Participation

IEEE – 13th System of Systems Engineering Conference - SoSE 2018
Paris, France, June 19-22, 2018

PROGRAMME on: <http://sosengineering.org/2018/>

REGISTRATION on: <http://sosengineering.org/2018/registrations/>

On behalf of the Organizing Committee of the IEEE – 13th System of Systems Engineering Conference, it is a great honor and pleasure to welcome you in Paris.

IEEE SoSE 2018 has vast ramifications in numerous engineering fields such as system management and engineering, control, multi-scale and multi-physics system modelling, risk analysis, safety, security, resilience, decision-making, interaction with humans, cooperation and coordination in competitive multi-systems, and in applications such as transportation, critical infrastructures, manufacturing, healthcare, environment, cyber-physical systems, defense, and aerospace. The 2018 conference theme is “Systems of systems Management and Control: Frontiers between cyber, physical, and social systems”.

The programme includes plenary sessions, panel sessions, regular and poster sessions, and exhibitions. The fourth day focuses on ongoing projects, research priorities and innovation strategies at European level in systems of systems engineering.

LIST OF INVITED SPEAKERS:

- Judith S. Dahmann (The MITRE Corporation, USA).
- Robert Plana (Assystem, France).
- Jean-Luc Garnier (Thales, France).
- Alessandro Golkar (Airbus, France).
- Philippe Bonnifait (Laboratory Heudiasyc, UTC/CNRS, France).
- James M. Tien (University of Miami, USA)

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- Philippe Convain (Plastic Omnium Auto Inergy, France).
- Atta Badii (University of Reading, UK).
- Kerry Lunney (Thales, Australia).

- Yves Lecointe (French National Research Agency – ANR).
- Thierry Denoeux (Laboratory Heudiasyc, UTC/CNRS – Labex MS2T).
- Raja Chatila (Institute of Intelligent Systems and Robotics, Sorbonne Université – Labex SMART)
- André Ayoun (AFIS, Ariane Group).
- Yann Chazal (Renault).
- Sandro D’Elia (European Commission – DG Connect).
- Michael Paulweber (ARTEMIS-IA).
- Charles Robinson (Thales, EU Platforms4CPS coordinator).

THREE INTERACTIVE PANELS:

- Panel 1 (INCOSE): Application of Model-Based Systems Engineering to Systems of Systems.
- Panel 2 (INCOSE): The Role of Systems of Systems Engineering in Systems Engineering of the Future.
- Panel 3: Research priorities and agenda in SoSE (including large-scale complex systems, CPS...) at European level.

ACADEMIC SPONSORS:

- Labex MS2T, Compiègne, France.
- Université de technologie de Compiègne / Association Sorbonne Université, France.
- CNRS.
- ACE Lab. University of Texas San Antonio, USA.

TECHNICAL SPONSORS:

- IEEE Systems, Man, and Cybernetics Society.
- IEEE Reliability Society.
- International Council on Systems Engineering, INCOSE.
- Association Française d’Ingénierie Système, AFIS.

SPONSORS:

Airbus / Assystem / Plastic Omnium / PTC
AFIS / Thales
SE-Training

SOCIAL EVENTS:

Welcome cocktail on June 19, 2018.
Dinner cruise on the Seine river, June 20, 2018.

MORE INFORMATION: <http://sosengineering.org/2018/>

ADDRESS:

Sorbonne Université, Campus Pierre et Marie Curie - 4 place Jussieu - 75005 Paris.

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OneSoft's Machine Learning Solutions Showcased at Microsoft-Executive Briefing Center in Brussels for EMEA Oil and Gas Executives

14 May 2018

OneSoft Solutions Inc. is pleased to report that Brandon Taylor, CTO and President of OneSoft's OneBridge USA subsidiary, presented the Company's Machine Learning solutions at an Executive Briefing Center event hosted by Microsoft last week in Brussels, Belgium. Mr. Taylor demonstrated the Company's technology to senior oil and gas (O&G) industry executives from Europe, Middle East and Africa ("EMEA") and subsequently engaged in one-on-one meetings with prospective customers and potential reseller partners during the two-day event.

"The invitation to present at this event with other high-profile industry leaders including Baker Hughes GE, PriceWaterhouseCoopers and Honeywell continues to demonstrate Microsoft's strong commitment to market OneBridge's solutions globally," said Mr. Taylor. "We were thrilled to introduce our Machine Learning solution to prospective customers outside of North America, and to meet the executives and decision makers with whom we will follow up as part of our sales process."

The event was organized to enlighten attendees about Microsoft's technology and partner strategies that can assist Oil & Gas organizations to accelerate their digital transformation to leapfrog ahead of competitors, by leveraging Data Science, AI and Machine Learning, and Predictive Analytics." [Click here for more information about the event.](#)

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Rebecca Minkoff to Deliver Keynote at Gerber Technology's ideation 2018 Software Tech Conference

15 May 2018

Gerber Technology is proud to announce that fashion designer [Rebecca Minkoff](#) will serve as guest speaker for [ideation 2018](#). This year's conference will be held in Miami Beach from October 3- 5.

An industry leader, Rebecca is an active member of the CFDA, has spoken at dozens of conferences such as SXSW, Fortune's Most Powerful Women, and TEDx, and supports multiple philanthropies. She is also an industry disruptor, pushing the boundaries of fashion and tech. Rebecca lives with her husband and three children in Brooklyn, NY.

"There are key lessons for our customers to learn from Rebecca," said Karsten Newbury, senior vice president and general manager Software Solutions at Gerber Technology. "She is absolutely at the intersection of business and technology, leveraging in-store, digital and social connectivity in ways that are driving exponential success for her brand. Leveraging digital technologies in the right way is what separates winners from their competitors these days, and our integrated Digital Solutions are focused on giving our customers this competitive edge."

Rebecca is committed to innovation and technology making an impact for her customers. She has live-streamed and used drones for her runway shows and is partnering with Intel on motivating women on STEM and she has developed wearable technology. Her retail stores, labeled as "The Store of the Future" by The Wall Street Journal, were some of the first in the industry to utilize technology to build a

better experience for the millennial female customer.

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TraceLink Adds Industry Visionaries to Discuss Machine Learning, Artificial Intelligence, Big Data and Patient Engagement at FutureLink Munich

14 May 2018

[TraceLink Inc.](#) today announced the [latest keynote speakers](#) for its upcoming [FutureLink Munich](#) conference to be held June 5-7, 2018. Confirmed speakers include industry and academic thought-leaders: Professor Elgar Fleisch, Ph.D., of ETH Zurich; Justus Wolff of the Syte Institute; and, Andrew Rut, M.D., CEO, MyMeds&Me.

FutureLink Munich Addresses Artificial Intelligence, Machine Learning and Patient Engagement
The unique FutureLink value track will address the operational and commercial challenges in the pharmaceutical and healthcare arenas, delivering industry insights on how to capitalize on serialization and big data with artificial intelligence (AI), machine learning and predictive analytics, to improve patient outcomes. The conference will include discussions and workshops for commercial executives interested developing transformative strategies for brand protection, patient safety, instant and accurate product recalls and directly engaging healthcare providers at the point-of-dispense, and with patients at the point of consumption.

"The future of healthcare is heading towards this revolutionary merge of the digital and physical world. New and advanced technologies such as high-resolution sensors, machine learning, digital biomarkers, health data platforms and conversational agents, will transform global healthcare in fighting chronic illnesses such as cardiovascular disease, cancer, chronic respiratory disease, diabetes, and mental illness," said Professor Fleisch. "To a large part, these diseases can be relieved or even prevented by inducing behavioral change and leveraging AI and precision medicine. For the first time, through these technological advancements, as well as the ability to seamlessly share information, such as serialized data, we have the scalable platforms to make a positive impact on alleviating the burden of these diseases."

FutureLink Munich is being held at the Sheraton Munich Arabellapark Hotel.

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Upcoming ManuCore Manufacturing and Supply Chain Leadership Forums

18 May 2018

Manufacturing Leadership Forum, Europe

June 6-8 2018, Warsaw, Poland

"The annual gathering for senior European manufacturing leaders to network, benchmark and drive change in their operations."

Supply Chain Leadership Forum, USA

June 19-20, 2018, Dallas, Texas

“America’s new, premier platform for SVPs, EVPs, and VPs of Supply Chain, all working together to achieve actionable advice and innovation in their organisations.”

To learn more about these events, please visit <https://manucore.com/events/>

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Financial News

Altair Announces First Quarter 2018 Financial Results

14 May 2018

[Altair](#) released its financial results for the first quarter ended March 31, 2018.

“Altair started 2018 with a strong financial performance highlighted by software product revenue growth of 26% and profitability that exceeded expectations,” said James Scapa, Founder, Chairman and CEO. “Our performance in the first quarter reflects good execution, improving market dynamics and the positive impact of the investments we have made to strengthen our product portfolio and go-to-market team.”

Scapa continued, “We have further enhanced our solution set with the recent acquisitions of CANDI, which extends our capabilities around edge gateway computing and the Internet of Things, and FluiDyna, a developer of GPU-based fluid dynamics and numerical simulation technologies. These are exciting technologies that increase the value Altair can deliver for customers and exemplify our expanding number of opportunities for future growth.”

First Quarter 2018 Financial Highlights

- Software product revenue was \$68.1 million, an increase of 26% from \$54.1 million for the first quarter of 2017.
- Total revenue was \$91.7 million, an increase of 19% compared to \$76.9 million for the first quarter of 2017.
- Net income was \$3.9 million, compared to net loss of \$(2.2) million for the first quarter of 2017. Diluted net income per share was \$0.05, based on 72.4 million diluted weighted average common shares outstanding, compared to diluted net loss per share of \$(0.04) for the first quarter of 2017, based on 50.1 million diluted weighted average common shares outstanding.
- Adjusted EBITDA was \$7.7 million, compared to \$2.9 million for the first quarter of 2017. Adjusted EBITDA represents net income (loss) adjusted for income tax expense, interest expense, interest income and other, depreciation and amortization, stock-based compensation expense, restructuring charges, asset impairment charges and other special items as determined by management.
- Non-GAAP net income was \$6.1 million, compared to \$1.6 million for the first quarter of 2017. Non-GAAP net income per share was \$0.08, based on 72.8 million diluted weighted average common shares outstanding, compared to \$0.03 for the first quarter of 2017, based on 61.2

CIMdata PLM Industry Summary

million diluted weighted average common shares outstanding. Non-GAAP net income excludes stock-based compensation, amortization of intangible assets related to acquisitions and certain tax adjustments.

- Cash flow from operations was \$26.7 million, compared to \$19.2 million for the first quarter of 2017.
- Free cash flow, which consists of cash flow from operations less capital expenditures, was \$25.0 million compared to \$18.2 million for the first quarter of 2017.

To view the full release with associated tables, please visit: <http://investor.altair.com/news-releases/news-release-details/altair-announces-first-quarter-2018-financial-results>

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CENIT with high sales growth in the 1st quarter 2018

16 May 2018

After three months, CENIT AG was able to significantly increase its sales and sales revenues from third-party software, in particular through the acquisition of the KEONYS Group. On the other hand, EBIT decreased by 13% in the first quarter due to the decline in the sale of own software.

During the first three months, CENIT group generated sales revenues of EUR k 40,934 (prior year: EUR k 29,955/36.7%). Sales revenues in CENITs consulting and services segment increased by 2.5% to EUR k 12,553 (prior year: EUR k 12,245). Sales of third-party software decreased by approx. 83.8% to EUR k 24,694 (prior year: EUR k 13,435). Sales proceeds from CENIT's proprietary software decreased from EUR k 4,160 to EUR k 3,616 (-13.1%).

The gross yield (operating output less cost of materials) amounted to EUR k 21,509 (prior year: EUR k 18,584), representing an increase of 15.7%. CENIT achieved EBITDA of EUR k 2,153 (prior year: EUR k 2,656/-18.9%) and EBIT of EUR k 1,428 (prior year: EUR k 2,154/-33.7%). Results per share were EUR0.13 (prior year: EUR 0.17).

Orders Development

During the first three months, the group-wide order intake totaled EUR k 53.505 (prior year: EUR k 33,198). On 31st March 2018 orders in hand amounted to EUR k 58.048 (prior year: EUR k 32,488).

Asset and Financial Situation

On the balance-sheet date, equity capital totaled EUR k 41,719 (31 Dec. 2017: EUR k 40,855), accounting for an equity ratio of 41.4% (31 Dec. 2017:46.8%). On the balance-sheet date, bank deposits and liquid assets totaled EUR k 33,736 (31 Dec. 2017: EUR k 23,692). The operative cash flow was

EUR k 13,929 (prior year: EUR k 10,081).

Employees

On 31st March 2018, CENIT group employed 758 staff (prior year: 613). Group-wide personnel costs for the reporting period were EUR k 15,209 (prior year: EUR k 12,650).

Outlook

For the current year, the CENIT Group is anticipating a sales growth by 25% with unchanged earnings (EBIT) compared to the previous year.

Please visit CENIT's homepage for the full 3 Months Report 2018: www.cenit.com/reports.

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Implementation Investments

DESCENTE Speeds Ahead with Centric PLM

15 May 2018

DESCENTE LTD. has selected Centric Software to provide its Product Lifecycle Management (PLM) solution.

Established in 1935, a Japanese menswear company called TSURUYA started making baseball clothing in the 1950s to capitalize on the growing baseball trend. The company then made a revolutionary move into skiwear in 1954 and has been at the forefront of innovation in skiwear ever since. The name 'DESCENTE', French for "downhill skiing", was adopted in 1961. Today, DESCENTE is a worldwide manufacturer and seller of sporting items. DESCENTE owns 15 brands across sports as diverse as swimming, golf and football, including Arena, Munsingwear and Le Coq Sportif besides the house brand DESCENTE.

As Terumitsu Watanabe, Manager, Product Engineering Division 1, explains, the company began looking for a PLM solution to boost product development and standardization.

"Errors and mistakes during the product design phase could potentially cause defects and this is something we wanted to improve," says Mr. Watanabe. "We also found that it was taking too much time to organize and communicate information effectively during product planning and development."

"We decided to invest in a PLM solution to ensure product quality and speed up the product development process," Mr. Watanabe continues. "We knew it would also help us to review our way of working and standardize operations across our brands."

"We found that Centric could meet our needs," notes Mr. Watanabe. "It's a cloud-based solution, which makes it ideal for global use. The simplicity of deployment is a very attractive feature, as it is configured rather than customized. Because of this, we will be able to deploy the solution in a very short period of time."

CIMdata PLM Industry Summary

Centric PLM is already in use at two DESCENTE owned brands and now will be rolled out to the remaining brands.

“We’re looking forward to improving operational efficiency and increasing productivity,” says Mr. Watanabe. “It’s going to completely transform our way of working and will help us to create standard operations across a great variety of brands.”

As Mr. Watanabe concludes, “We have a good level of communication with Centric’s team in Japan, and we are building a long-term partnership. We look forward to seeing the new features that Centric upgrades will bring in the future and we know PLM will help us to streamline the way we operate.”

“We would like to welcome DESCENTE, our latest partner in Japan,” says Chris Groves, President and CEO of Centric Software. “DESCENTE is a very successful sportswear company with an impressive portfolio of brands and we are thrilled to embark on a long-term partnership together.”

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GiFi Optimizes Merchandise Financial Planning with TXT Retail, an Aptos Company

16 May 2018

[TXT Retail](#), an [Aptos](#) Company, today announced that GiFi, the brand in France specializing in home and family products, has successfully implemented the TXT Retail solution for merchandise financial planning.

The deployment is part of a large, ambitious technology transformation initiative by GiFi named “Millennium,” that will include, among others, the rollout of TXT Retail solutions for assortment planning and PLM.

Founded in 1981, GiFi has been experiencing an impressive run of national and international growth. The group operates a network of over 440 stores in France and abroad, managing an average of 40,000 products in-store, with more than 50 percent launched annually.

“The Millennium project supports our growth strategy and the goal to reach 1,000 stores by 2027,” said Alexandre Ginestet, general manager at GiFi. “Objectives of the initiative are to simplify our IT landscape to better support our fast-growing business and to obtain a centralized view of key data, while integrating our processes from conception to execution. We’ve partnered with TXT Retail for all planning activities; this go-live marks a first, important milestone in our program.”

The TXT Retail solution is helping GiFi manage its merchandise financial planning process in a highly collaborative, integrated manner – from weekly budgeting to the definition of the commercial action plans, which include the planning of promotional and media activities (catalog, TV and radio advertising) to sales planning and the allocation of the selling space to the different product categories.

GiFi’s merchandise planning process involves a large number of users across the business – from category managers, sales directors, merchandising, and marketing directors, to finance, controlling, and the general manager. All functions contribute to the plan and can monitor in-season results through dedicated KPIs, to achieve full process visibility and responsiveness.

“The use of TXT Retail has brought the significant advantage of integrating merchandise planning processes while leveraging the contribution of all departments involved,” added Christophe Naimi,

CIMdata PLM Industry Summary

commercial director at GiFi. “With a vast assortment, fast product innovation and an aggressive store opening program, TXT Retail’s merchandise financial planning solution ensures the best product selection for our customers, in full alignment with our business objectives and chain growth.”

Noel Goggin, Aptos CEO and culture leader, commented: “We are delighted to assist such a dynamic and talented organization in its transformational project. Our solutions allow retailers, which are evolving their business models, channels and requirements, to stay at the forefront of planning practices while achieving tangible benefits across those processes that are most strategic to them.”

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Joyung Uses Teamcenter with Active Workspace for Rapid Development

18 May 2018

Joyoung Co. Ltd., China's most influential small household appliance brand for eight consecutive years, uses Teamcenter with Active Workspace to improve product development and manufacturing.

Joyoung uses Teamcenter primarily for data and project management and application software integration management, enabling collaboration and process automation for users across the product lifecycle. The company has tailored Active Workspace, the innovative interface for Teamcenter that provides users with a streamlined and intuitive PLM user experience, to support the development of all product lines.

When choosing a product lifecycle management (PLM) software solution, Joyoung considered the following key criteria to decide on Teamcenter:

- 1) The PLM system should be a proven product that is influential in the industry;
- 2) It must have successful implementations and application cases in the household appliance industry;
- 3) It should be accompanied by strong team implementation and technical support capabilities.

With the implementation of Teamcenter, Joyoung gradually discovered that the PLM solution is more than a data management system. The business rules embedded in Teamcenter are derived from industry best practices and help standardize and optimize Joyoung’s business processes. In addition, Siemens PLM Software’s technical and business support teams provided Joyoung with expert guidance in formulating business rules.

“Teamcenter is very helpful for Joyoung in terms of both data management and business management,” said Jing Jin, PLM Project Manager, Joyoung. “It has enhanced Joyoung’s business process, making work more systematic and efficient.”

“In the future, Joyoung hopes to make full use of Siemens PLM Software’s capability of consolidating resources to move quickly from market requirements to products, and improve the process from development and design to product service,” Jin says.

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Product News

Alphacam Programs Machine Tools On Several Booths at Swiss Siams Trade Fair

14 May 2018

Visitors to the Siams Exhibition in Switzerland were particularly interested in a customised Alphacam module, developed by the software's Swiss reseller, MW Programmation.

'Automatic Random Numbering' takes Alphacam's built-in 'Automatic Numbering functionality a step further by allowing automatic engraving on each part with a random number, without needing to create a program for every component.

Michaël Weber, MW Programmation Application Technician, says : "Alphacam and the CNC machine tool remain connected, so the machine's mode is always detected and recognised, enabling the engraving routine cycle to be sent at the right moment. Alphacam manages this process in the background, based on a list created by the customer."

A second piece of customisation on show was MW Programmation's 'EduNC' module, which assists users with different CNC ISO languages, such as FANUC or Heidenhain, directly within Alphacam.

As well as displaying the latest 2018 release of Alphacam on the MW Programmation booth, a number of other booths featured the software in action.

"Visitors had the chance to see CNC machine tools programmed with Alphacam, producing components. One was the new 5-axis Kummer K5, which was machining stainless steel with feed and speed rates of 15,000 mm per minute, at 60,000 revs per minute," says Michaël Weber.

"And several machine manufacturers visited our booth to discuss present and future developments where Alphacam is directly integrated with the machine, to replace the machine controller interface."

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ANSYS 19.1 Delivers the First Comprehensive Solution for Simulation-Based Digital Twins

15 May 2018

With today's release of ANSYS® 19.1 software, product developers can spur product innovation by rapidly building, validating and deploying simulation-based digital twins within a single workflow. [ANSYS'](#) latest release builds upon its industry-leading products and platform across all physics, empowering customers to accelerate productivity and eliminate product complexity – lowering costs and time to market.

Companies are faced with unrelenting pressure to drive innovation and increase product quality while reducing cycle times, costs and risk, especially once a product is in operation. ANSYS 19.1 delivers [ANSYS® Twin Builder™](#), a first-of-its-kind product enabling customers to build, validate and deploy simulation-based digital twins within one workflow – potentially saving millions of dollars for customers in the oil and gas, industrial, energy, and aerospace and defense industries.

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Traditional preventive maintenance for industrial assets leads to expensive and potentially unnecessary maintenance costs. Those costs can be greatly reduced with a digital twin, which combines accurate physics-based virtual replicas of a product with data collected using industrial internet of things (IIoT) connectivity platforms. The resulting intelligence and predictive maintenance insights enable engineers to analyze smart machines in real-world operating conditions and make informed decisions that substantially improve product performance — reducing risk, avoiding unplanned downtime and nurturing product development with precise and individualized feedback about product behavior during operations.

ANSYS Twin Builder is the only product that offers a packaged approach for digital twins — enabling engineers to quickly build, validate and deploy these digital representations of physical products. The open solution integrates with any IIoT platform and contains runtime deployment capabilities for constant monitoring of every individualized asset used during operation. The combination of industrial asset connectivity with holistic system simulation, powered by ANSYS Twin Builder, empowers customers to perform diagnostics and troubleshooting, determine the ideal maintenance programs, optimize the performance of each asset and generate insightful data to improve the next generation of the products.

"Furthering our vision of Pervasive Engineering Simulation, ANSYS 19.1 combines all physics and delivers to our customers the most complete toolset to tackle the toughest design challenges," said Eric Bantegnie, vice president and general manager, ANSYS systems business unit. "This release empowers customers with the most efficient productivity gains — spurring product innovation and dramatically effecting their bottom lines, as well as on the global economy."

ANSYS 19.1 brings updates across all physics, from additive manufacturing to 3D design, to tame complexity and enhance analysis capabilities across product suites — improving users' productivity and generating more accurate designs and results.

Additional highlights of the 19.1 release include:

Taming Complexity and Faster Results Across Sectors

ANSYS 19.1 delivers new [metal additive manufacturing solutions](#) — empowering customers to quickly test their product designs virtually before printing a part. ANSYS® Additive Suite™ enables designers to optimize weight reduction and lattice density; create, repair and clean up CAD geometry; simulate the additive process; and conduct structural and thermal analysis for data validation. Now, users can incorporate simulation prior to the printing process to design, test and validate the performance of a part at the design stage even before turning on the printer – greatly reducing the high cost of physical trial and error.

Also available in the mechanical suite are new functionality and resources, including more than 100 material models from [Granta](#). The extensive materials library folder within mechanical enables engineers to make material selection assignment and validation easier. With 19.1, topology optimization users have increased flexibility when running calculations where constraints or responses are defined.

In the fluids suite, ANSYS 19.1 offers users a new approach to cavitation modeling across diverse applications — from hydro pumps to rocket fuel systems. Users can now reliably predict cavitation using pre-existing material properties, without the need for empirical model parameters or extensive physical testing required by traditional approaches.

ANSYS 19.1 introduces ANSYS® EnVision™ Pro, a new version of ANSYS® EnSight™ Viewer, which empowers engineers to interact with EnSight data and create new views and photorealistic images

CIMdata PLM Industry Summary

in real time. Multiple viewing formats ensure data can be viewed by any audience, using any technology. Users can analyze data, create new retraced images and flipbooks, and garner insight from datasets even when they are offline, out of the office or not using EnSight.

"Sub-Zero uses simulation to design and iterate new functionalities quickly, without sacrificing product reliability or quality. With ANSYS solutions, Sub-Zero reduced the number of physical prototypes by 25 percent, which empowered our engineers to work faster and more cost-effectively," said Anderson Bortoletto, principal engineer, Sub-Zero. "Sub-Zero relies on ANSYS to remain at the leading-edge of engineering —each ANSYS product update enables us to further optimize our product development."

In the embedded software suite, designers can take advantage of the four-times faster loading of project models and improved navigation features for increased usability.

In the 3D design suite, designers will greatly benefit from new capabilities that accelerate and extend for simulating more types of loading conditions, faster and with higher accuracy. In addition, fly-through and perspective view modes have been added for creating immersive visualizations. Also new is the automated meshing feature and inclusion of instant post-processing of results, enabling engineers to create and view product behavior faster and easier than ever before.

"To develop successful medical implants like cardiovascular stents, Ninsight must simultaneously assess the hemodynamics and the structural performance of a huge set of wildly different designs," said Michael Stadler, chief technology officer, Ninsight, Inc. "With ANSYS Discovery Live we can harness the parallel processing power of NVIDIA graphics cards and reduce the initial development time of new stent designs by a factor of 10."

Enhanced Analysis Capabilities

ANSYS 19.1 delivers new analysis capabilities in the electromagnetics suite for designing wireless communication, autonomous and electrification technologies. New features include advanced driver-assistance systems and autonomous radar analysis and new hybrid simulation techniques for printed circuit board analysis. Comprehensive system modeling functionality is included with the ANSYS electromagnetic field simulation products — delivering advanced analysis capability for power electronics systems.

In the systems suite, ANSYS® medini analyze comes with significantly improved safety methods, including a native model-based editor for Hazard and Operability Study for the automotive, aerospace and defense and rail industries.

In the semiconductor suite, a new 3D integrated circuit (3DIC) graphical user interface wizard enables automatic and seamless connections between multiple dies, interposer and package for chip-level power and thermal integrity analysis, significantly improving usability and easing 3DIC setup and analysis. ANSYS 19.1 also extends the chip-package-system thermal solution for performing early reliability analysis, offering flexibility for system-level design, maximizing design coverage and reducing design margins and costly design iterations.

For more details about the features and enhancements available in ANSYS 19.1 visit www.ANSYS.com/19-1.

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Arduino and Mathworks partner, release Arduino Engineering Kit

12 May 2018

[Announced on the Arduino blog:](#)

“We’re excited to announce the Arduino Engineering Kit, the first product released as a result of our new partnership with MathWorks, to reinforce the importance of Arduino at the university level in the fields of engineering, Internet of Things, and robotics.

The Arduino Engineering Kit, which will be available for purchase starting today [on the Arduino online store](#), consists of three cutting-edge, Arduino-based projects and will teach students how to build modern electronic devices – challenging them intellectually and helping them develop physical engineering skills that will better prepare them to enter the commercial market following graduation. In addition to the hardware, after registering online, students and educators will have access to a dedicated e-learning platform and other learning materials. The kit also includes a one-year individual license for MATLAB and Simulink, providing the user with hands-on experience in system modeling and embedded algorithm development.

Following the global success of Arduino CTC 101, a program tailored for upper secondary schools, the Arduino Engineering Kit enables college students and educators to incorporate core engineering concepts like control systems, inertial sensing, signal and imaging processing, and robotics with the support of MATLAB and Simulink programming. These software packages are the base of industry-standard tools for algorithm development, system modeling, and simulation, all of which will be required in their future careers.

Each Arduino Engineering Kit comes with a durable and stackable plastic toolbox for easy storage and years of reuse. Inside the box is an Arduino MKR1000 board, several customized parts, and a complete set of electrical and mechanical components needed to assemble all three projects:

- **Self-Balancing Motorcycle:** This motorcycle will maneuver on its own on various terrains and remain upright using a flywheel for balance.
- **Mobile Rover:** This vehicle can navigate between given reference points, move objects with a forklift, and much more.
- **Whiteboard Drawing Robot:** This amazing robot can take a drawing it’s given and replicate it on a whiteboard.

“We designed the Arduino Engineering Kit the way we would have liked to have learned mechatronics, control algorithms, state machines, and complex sensing when we were in our first years of engineering school: in a fun and challenging way,” said David Cuartielles, Arduino co-founder and Arduino Education CTO. “It’s all about hands-on activities built on top of well-grounded theoretical concepts. But more importantly, after finishing the basic materials, there’s plenty of flexibility to experiment, for the students to deviate and test their engineering creativity.”

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IronCAD’s Latest Update Expands CAD Productivity

14 May 2018

CIMdata PLM Industry Summary

The 3D CAD platform of choice among metal fabricators and custom machinery equipment manufacturers, IronCAD's 2018 Product Update #1 adds features specifically designed to increase detailer productivity by streamlining the steps needed to move 3D designs into the 2D production drawings.

Key features of Product Update #1 including enhanced game-changing bulk drawing feature and a dramatically improved shrink wrap modeling simplification utility for more secure, more inclusive file sharing to support active collaboration.

With the new process improvements for the bulk drawing creation, parts and assemblies can now be selected and can store predefined templates that automatically populate the bulk creation process. This stored information can be used in conjunction with IronCAD's powerful Catalogs of pre-made designs, speeding up the reuse of existing designs and saving countless hours that might otherwise be spent preparing designs for detailing.

"IronCAD has continued its commitment to fabricators and machinery manufacturers by extending the functionality we introduced with IronCAD 2018 to improve productivity and strengthens security when sharing data," said Cary O'Connor, Vice President of Marketing at IronCAD. "Our core customers are able to achieve massive gains in productivity thanks to the improved bulk drawing creation process for moving from 3D to 2D, along with a streamlined interface and more advanced shrink wrapping of data for added security."

Product Update #1's shrink wrap enhancements include more advance preparation options for packaging up designs and reducing outputted data such as shell representations of designs, supporting secure file sharing options for diverse use cases.

Since collaborative design workflows are critical for fabricators and machinery manufactures, IronCAD 2018 Product Update #1 also imports and exports to the latest native CAD formats, supporting collaboration between design groups that use different systems.

Continuing IronCAD's reputation as the easiest-to-learn 3D CAD platform on the market, Product Update #1 also includes usability improvements such as:

- Quick feature creation from existing geometry by simply pushing and pulling on face handles to create positive and negative shapes.
- Streamlined interface that improves access and navigation to many common commands.
- Simple reconnection tools that support IronCAD's intelligent attachment capabilities making it easy to relocate connected elements.

For a full list of IronCAD 2018 Product Update #1's new features, visit www.ironcad.com/blog/ironcad-2018pu1.

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Kloudville Launches Enterprise PLM 360

14 May 2018

Kloudville Inc. today announced the addition of Product Lifecycle Management (PLM) 360, to its Business 360- in-a-Box portfolio, targeted at B2B wholesalers, distributors, retail, service providers, and

CIMdata PLM Industry Summary

their ecosystem of suppliers.

Kloudville Enterprise PLM 360 serves the community of marketing professionals and Product Managers engaged in the daily creative business of portfolio enhancement, promotion and market making activities. PLM 360 provides a full end-to-end solution, extending support and complementing the full lifecycle activities from inception through to launch, and evaluation to retirement. Marketing executives and Product Managers now have the underlying tools, processes and methods to pro-actively engage and lead product launch campaigns from an all-in-one PLM application.

Predictive management aligned with time-to-market an imperative for Kloudville's customers.

Product marketing and managers face the challenge of bringing increasingly complex products to market but are limited by disconnected PLM processes and systems held together by desktop spreadsheets, e-mail and a wide variety of disparate applications. As a result, they are pursuing digital transformation initiatives to enable cross-discipline collaboration, connect the extended enterprise, and unlock the value of their product data. Focused on these PLM business needs and the transformative nature of the industry within a digital commerce supply chain, Kloudville Enterprise PLM 360 provides both role and context-based process alignment and predictability through-out the product development cycle.

“Kloudville PLM 360 is currently being positioned at several leading wholesalers and retail distribution businesses, where the product complexity is out pacing business performance and are increasingly in need of a wholesale change in their PLM process,” said Zarar Rana, CEO & President of Kloudville.

“With the introduction of Enterprise PLM 360, and our 20-year pedigree in delivering agile catalog driven order management solutions for service providers, we are clearly providing a new era of Product Catalog Management solutions for a variety of vertical industry businesses from which they are able to realize optimal benefits in months, in areas that they've struggled to address previously for years.

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Propel Introduces Enterprise-Ready PLM That Helps Scale Tomorrow's Brand Leaders

16 May 2018

[Propel](#) today announced the Propel Innovator's Edition, a PLM software offering that provides innovative businesses the robust enterprise PLM capabilities that they want and with simpler configuration for their immediate needs. For just \$1500 per month for 10 users, customers can use the core PLM features they need, including bill of materials (BOM) management, manufacturing data, graphical redlines and change management. The Innovator's Edition also offers a quick start implementation that gets users up and running in just one week.

The Propel Innovator's Edition offers fast-growing companies the following benefits:

- Enterprise PLM features at a monthly cost of \$1500 for 10 users, which helps small businesses at a budget they can afford
- A \$2500 quick start implementation can get users up and running in just 1 week, plus Propel's intuitive and modern UI drastically reduces training time

CIMdata PLM Industry Summary

- Out-of-the-box attributes, change workflows, product categories and lifecycles make it easy for even the casual user to collaborate on complex product information
- Custom fields and drag-and-drop layouts help manage information needed for product success, including hardware, services or marketing collateral without IT resources
- Built-in and configurable dashboards allow for instant real-time drill-downs
- Modern and secure cloud PLM from Propel keeps data safe

“I’ve helped hundreds of small businesses with their PLM deployments over the years. Often the PLM was a good initial fit, but the inflexibility of legacy PLM technology wasn’t able to adapt to changing needs as they grew,” according to September Higham, Director of Professional Services at Propel. “Propel is offering the best of both worlds — really strong PLM features that are easy to use by engineers and small businesses, and it’s also scalable to meet the enterprise-class requirements of a large company.”

For more information on the Propel Innovator’s Edition, visit propelPLM.com.

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Updated Online Help for Latest WorkXplore

14 May 2018

WorkXplore has completely updated its online help in the latest version, to include new icons along with dialog and menu screen captures, so that user can easily recognize where they are in the help file.

The software was created to efficiently import and analyse all file types and sizes at high speed. It often takes less than half the time to open a file compared to the original CAD application, and Product Owner Luca Clerici says the new 2018 R2 version includes a number of items of new and enhanced functionality to save the user even more time and further improve their ability to perform part diagnostics, create assembly instructions, and prepare the production of 3D models.

These include displaying RGB colour for sheets. “Many customers said they needed the RGB code for surfaces, so we’ve added this to the Face Information dialog.”

Enhancements have been made to add more flexibility to operations, such as the introduction of the capability to define the rotation by vector, instead of two points, in the View Management.

A new ‘Triangles’ option shows or hides the current tessellation in the Change Entity Display menu. “The current shading remains optionally displayed on the screen if the ‘Triangles’ flag is activated by a right mouse click on the relevant entity.”

And the STEP Export function saves the model with respect to the active co-ordinate system. “If the current system axis is different from the absolute one, this important enhancement means the components can be translated relative to the co-ordinate system of the workplane,” says Luca Clerici.

Finally, WorkXplore 2018 R2 continues the software’s tradition of updating format support for around

CIMdata PLM Industry Summary

25 systems. The main new capabilities are:

- DXF/DWG support for 2018 files
- Solid Edge ST10 Version support
- SolidWorks 2018 Version support
- UG NX NX12 Version support.

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