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Realizing the digital enterprise: Customer round table

September 14, 2017
Digital Manufacturing and Design Innovation Institute (DMDII)
Chicago IL

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Realizing the digital enterprise: Customer round table

Thursday September 14, 2017

Agenda

8:00 - 08:30 AM	Registration, breakfast and networking
8:30 - 8:50 AM	Kickoff and welcome <i>Brian Frattaroli, Vice President, Portfolio Development, Siemens PLM Software</i> <i>Mary Kate Love, Engagement Manager, DMDII/UI Labs</i>
8:50 - 9:20 AM	Siemens keynote: Realizing the Digital Enterprise <i>Doug Fish, Industry Vice President, Industrial Machinery and Energy, Siemens PLM Software</i>
9:20 - 9:50 AM	Customer keynote: Disrupting the Industry through Connected Platforms <i>David Foulkes, Vice President & Chief Technology Officer, Brunswick Corporation</i>
9:50 AM - 10:20 AM	The digital enterprise panel Panelists: <i>David Foulkes, Vice President & Chief Technology Officer, Brunswick Corporation</i> <i>Doug Fish, Vice President, Industrial Machinery and Energy Industry, Siemens PLM Software</i> <i>Rahul Garg, Senior Director, Industrial Machinery and Heavy Equipment, Siemens PLM Software</i> Host: <i>Brian Frattaroli, Vice President, Portfolio Development, Siemens PLM Software</i>
10:20 AM - 12:20 PM	Digital enterprise tour
12:00 - 12:45 PM	Lunch, networking and tour feedback
12:45 - 1:30 PM	Developing a digital enterprise architecture <i>Ray Kok, Senior Director CTO Architecture and Innovation, Siemens PLM Software</i>
1:30 - 2:00 PM	Simulation keynote: Creating a Vision and Strategy for Predictive Engineering Analytics <i>Dr. Matt Straw, Managing Director, Norton Straw Consultants</i>
2:00 - 2:30 PM	The simulation panel Panelists: <i>Dr. Matt Straw, Managing Director, Norton Straw Consultants</i> <i>Arden Anderson, Manager, Design Analysis Group, Mercury Marine</i> <i>Ian Hogg, Senior Technical Manager, Siemens PLM Software</i> Host: <i>Nick Appleyard, Vice President, Portfolio Development, Simulation and Test Solutions, Siemens PLM Software</i>
2:30 - 2:45 PM	Break
2:45 - 3:15 PM	Manufacturing keynote: Leveraging the Production Twin for Simulation, Training and Execution <i>Bob Carrier, Client Relations Manager, R&E Automated Systems</i>
3:15 - 3:45 PM	Automation and IOT in the Digital Enterprise <i>Chintan Patel, Digital Enterprise Business Development Manager, Siemens Digital Factory</i>
3:45 - 4:15 PM	The digital production twin panel Panelists: <i>Bob Carrier, Client Relations Manager, R&E Automated Systems</i> <i>Chintan Patel, Digital Enterprise Business Development Manager, Siemens Digital Factory</i> Host: <i>Shankar Raman, Portfolio Development Executive, Industrial Machinery and Heavy Equipment, Siemens PLM Software</i>
4:15 - 4:30 PM	Closing and call to action <i>Doug Fish, Industry Vice President, Industrial Machinery and Energy, Siemens PLM Software</i>

*Agenda subject to change

Guest presenters



Arden Anderson
Manager, Design Analysis Group
Mercury Marine

Arden Anderson is a specialist in engineering simulations for Mercury Marine.

Mr. Anderson is responsible for structural analysis, crashworthiness, and vessel performance simulations. Mr. Anderson also determines computing hardware requirements and has helped Mercury Marine transition to High Performance Computing (HPC). On the personnel side, Mr. Anderson is responsible for a team of analysts located on-site in Fond du Lac and off-site in India. Prior to joining Mercury Marine in 2005, Mr. Anderson spent three years as an Engineering Analyst at Lawrence Livermore National Laboratory, simulating blast loading and hypervelocity impact. At LLNL he was exposed to world class HPC environments, including the fastest computer in the world at that time (BlueGene/L). Mr. Anderson holds a BS and MS in Engineering Mechanics from the University of Wisconsin - Madison and spent time interning at Lockheed Martin Missiles and Space, Kohler Engines, and both the University of Wisconsin Fusion Technology Institute and the Space Science & Engineering Center.



Bob Carrier
Client Relations Manager
R&E Automated Systems

Robert Carrier is a Client Relations Manager overseeing the Controls

Engineering divisions of R&E Automated Systems. Robert holds a BSEE (Lawrence Technological University) and a MSE (Oakland University). After spending two decades involved in automotive tooling design, manufacturing and management, Robert knows what truly drives conversations relating to IoT and future manufacturing. "It's how well you connect with the heart-beating people you're trying to help and communicate your understanding back to them".

Leveraging the Production Twin for simulation, Training and Execution

Have you been in a situation where you wished that you could have understood the manufacturing process before it was built??? Have you wanted to train your technical employees but, the physical cost of a training cell prevents you??? These challenges can be turned into opportunities through

Virtual Reality. Utilizing Process Simulate and Unity a manufacturing process can be simulated and validated prior to turning one bolt or spending money on capital assets, material, tooling and shop floor resources. The approved process can then become the technical training for your employees.



David Foulkes
Vice President & Chief Technology Officer, Brunswick Corporation

In 2015, the Brunswick Board of Directors elected David M. Foulkes an

officer of the Company and named him Brunswick Corporation's Vice President & Chief Technology Officer. He also serves as Vice President – Product Development, Engineering and Racing for Brunswick's Mercury Marine division. David joined Mercury Marine in 2007 and has been responsible for the delivery of a succession of successful new Mercury products, including innovative new outboard and sterndrive engine platforms, an expanded portfolio of high-speed diesel engines and Mercury's industry-leading suite of advanced controls systems and connected products. David has also led a major expansion of Mercury's engineering activity; recruiting a large number of engineers and significantly enhancing Mercury's test and development facilities.

In his role as Brunswick CTO, David has implemented a new corporate innovation strategy that includes increased cultivation of internal innovation and high levels of engagement with academia and the start-up community.

Previously, David spent 18 years with Ford Motor Company in a series of assignments of progressing responsibilities. He previously has also worked with Shell Exploration and the Ministry of Defense, both in the United Kingdom. He has a bachelor's degree in aeronautics and a master's degree in structural and fluid mechanics from Imperial College in London.

Disrupting the Industry through Connected Platforms

Achieving an end to end Digital thread across an organization requires a continuous evolution process. More often than not, past decisions can be drivers for future roadmaps. However, new business models, ever-changing technology and organizational behaviors must influence how this evolution occurs. A connected platforms strategy is one that takes into account the current organizational and technology structure and drives future models for Product Innovation and Performance, Plant and Production technologies and Customer interaction through the end to end Digital Enterprise.



Mary Kate Love
Engagement Manager
DMDII, UI Labs

Mary Kate Love is an Engagement Manager for DMDII at UI LABS. She is responsible for the Tier 1/Tier 2 industry members and start-ups at DMDII. Mary Kate works closely with members to identify and develop new and unique opportunities for collaboration. Prior to joining the DMDII team in June 2014, Mary Kate was the Recruitment Director at Queen of Peace High School in Chicago, where she focused on implementing Project Lead the Way, STEM education, and the new international student program. She also interned with the City of Chicago City Clerk's office. Mary Kate holds a bachelor's in Political Science from the University of Illinois at Urbana-Champaign.

As one of the first team members of UI LABS, Mary Kate has a passion for all things entrepreneurial and manufacturing. She is an active member in the Chicago Tech Community as well as a board member of the Young Irish Fellowship Club and Women Influence Chicago. Mary Kate spends most of her summers playing 16-inch softball.



Dr. Matt Straw
Managing Director
Norton Straw Consultants

Dr. Matt Straw is Managing Director of Norton Straw, a specialist engineering and technology consultancy working in strategy development, implementation and application of predictive engineering analytics and engineering simulation across a range of industries.

Matt's interest in this area started 22 years ago with an Engineering Masters degree and PhD (from the University of Nottingham in the UK) in the development and validation of Computational Fluid Dynamics (CFD) simulation relating to wind flows in the built environment and natural ventilation. He has since spent the last 18 years in industry working in the application of a range of mathematical modelling and simulation technologies across industries including oil and gas, energy, process, food and beverage, aerospace and the built environment.

While his team focus on application of simulation technology, Matt's own activities now to focus on how companies can develop and implement a digital strategy to best harness predictive engineering analytics and how digital twins can be used to deliver better, safer and more reliable equipment, systems, facilities and processes.

Creating a Vision and Strategy for Predictive Engineering Analytics

The aim of this presentation is to provide background to predictive engineering analytics technology, how it can be embraced and the potential value it offers. Following an introduction of what is meant by predictive engineering analytics, the digital twin and engineering simulation the presentation will provide case studies of how Norton Straw applies the technology to improve its clients' products, systems and facilities across different industries. The presentation will then focus on how to assess the value of simulation to any business and close by identifying the steps needed to develop and implement a digital strategy that embraces predictive engineering analytics.

Siemens presenters



Brian Frattaroli
Vice President
Portfolio Development
Siemens PLM Software

Brian Frattaroli is the Vice President of Portfolio Development, Americas Zone, for Siemens PLM Software, a business unit of the Siemens Industry Automation Division. In his current role, Brian is responsible for driving the sales of critical portfolio solutions acquired by Siemens PLM Software.

Previously, as Vice President of the Life Sciences and Consumer Products Industry, Brian ran the sales, business development and services teams focused on Fortune 500 enterprise accounts across the United States.

With 27 years in the high tech industry and 19 years with Siemens PLM, Brian has worked with global clients to implement value based PLM solutions in the Life Sciences, Consumer Products, Electronics and Aerospace industries.

Brian received a B.S. in Marketing from the Providence College and a MBA from the University of Connecticut. Brian, and his wife Susanne, have four children and live in Trumbull, CT.



Chintan Patel
Digital Enterprise Business
Development Manager
Siemens Digital Factory

Chintan Patel leads the Business Development Efforts for Digital Enterprise for Digital Factory (DF) Division of Siemens in the U.S. As Business Development Manager, Patel is involved in defining the company's digital enterprise strategy, creating customer roadmaps for adoption of digitalization and providing expertise in the Digital Enterprise solution set.

Patel joined Siemens in 2010. He has held a variety of technical sales and management positions across multiple key areas. Prior to Siemens, Patel worked as an independent contractor developing automation solutions for discrete manufacturing and process industries.

Patel holds a Bachelor of Engineering in Electronics Engineering from Nagpur University in India; a Master's of Science in Electrical Engineering from Illinois Institute of Technology in Chicago and a Masters of Business Administration (MBA) from the Texas A&M University in Commerce, TX.

Automation and IOT in the Digital Enterprise

Automation was the key driver for the third industrial revolution. But, in Industry 4.0, simply focusing on the automation of manufacturing processes, does not cater to all the requirements of the evolving Internet economy. A holistic approach stretching over the complete value-chain, including suppliers, is necessary. The manufacturing industry has entered the stage where end to end process automation and a metrics driven approach to production and service is the only way to ensure a long-term competitive position. The ability for manufacturers to reliably transition from Virtual to Real takes a holistic portfolio of PLM, Manufacturing Execution and automation technology that connects humans, devices and systems across the entire value chain - where all relevant information is available in real-time across suppliers, manufacturers and customers to make knowledge driven decisions.



Doug Fish
Vice President
Industrial Machinery and Energy Industry, Siemens PLM Software

With over 20 years experience at Siemens, Doug is recognized as a leader in driving operational effectiveness and alignment of teams to business objectives.

In his role as the executive responsible for the Industrial Machinery, Energy, and Process Industry business in the U.S., Doug leads a team of account executives, technical and business consultants to help customers to create and execute their digital enterprise strategies. With a deep understanding of what it takes to deliver value, Doug and his team partners with customers to achieve sustainable competitive advantage by safely and quickly leading their companies to achieve greater innovation through digitalization.

Doug holds a degree in Economics from the University of Michigan.

<https://www.linkedin.com/in/dougfish>

Realizing the Digital Enterprise

Digitalization is a hot topic today in every business in every industry. Business leaders recognize the urgent need to become “digital” and are under pressure to establish digital strategies which leverage today’s technologies. In this presentation, we will explore what it means to become a “digital enterprise” as a manufacturer, why some current thinking on that topic may be insufficient, and why many companies will fail in their efforts to transform themselves to become digital enterprises.



Nick Appleyard
Vice President
Portfolio Development Simulation and Test Solutions
Siemens PLM Software

Nick has over 25 years global experience in Computer Aided Engineering simulation with a deep understanding of its application, integration into product life management and deployment to a broad range of industries. General management and sales experience working at small (start-up) and

large companies (fortune 500), leading a distributed multicultural team in sales and engineering with diverse educational backgrounds to meet company financial targets. Experience in taking ideas from concept to final launch and implementing go-to-market strategies. Technical experience in applying simulation at both system and component level to drive product development.



Rahul Garg
Senior Director
Industrial Machinery and Heavy Equipment, Siemens PLM Software

Rahul Garg is the Senior Director for Siemens PLM Software responsible for defining and delivering the key strategic initiatives and solutions for the Industrial Machinery & Heavy Equipment industry and global business development.

He and his team are responsible for identifying key initiatives and developing solutions for the industry while working closely with industry leading customers and providing thought leadership on new and emerging issues faced by the machinery industry.

Prior to taking on this role, he was responsible for Industry marketing and delivering the Siemens PLM Software Corporate PLM vision and strategies to the global machinery industry, high tech electronics and automotive industry. Garg’s experience and insight are derived from 25 year career delivering software-based solutions for product engineering and manufacturing innovation for the global manufacturing industry. He has had numerous successes in P&L management, technology leadership, operations management, startups, business development, sales and services.

Garg has a Bachelor’s degree Computer Engineering from Bombay University, India and a Master of Science Degree in Computer Science from Wayne State University, Michigan, USA. He is an avid cyclist and enjoys riding long distances. He and his wife, Seema, reside in Troy, Michigan with their two sons.



Raymond Kok
Senior Director,
Chief Technology Office
Siemens PLM Software

Raymond Kok is the Senior Director of our Architecture & Innovation organization for the Chief Technology Office at Siemens PLM Software. Located at our Siemens PLM Software R&D Center @ Cypress, CA.

In his current role leading the Architecture & Innovation organization Raymond is responsible for the user experience, portfolio architecture and technology alignment across our Siemens PLM Software products. As part of this position at Siemens PLM Software Raymond leads major cross-functional portfolio development initiatives focused on delivering our integrated Digital Enterprise portfolio.

Raymond received his MSc and BSc in Mechanical Engineering at the Technical University of Eindhoven, the Netherlands.

<https://www.linkedin.com/in/raymond-kok-8022578/>

Developing a Digital Enterprise Architecture

Many of us are seeing the potential of pursuing the promise of a Digital Enterprise but not always is it clear where to start or what solutions elements to go pursue. What are the right solution elements and what should my priority be? This session organized by Raymond Kok will focus on talking us through the major building blocks forming the foundation of a Digital Enterprise strategy and how to organize them based on your business priorities. As part of this presentation Ray will cover the viewpoint of Siemens PLM Software and an overview of major investments put in place to push the advancement of digitalization.



Shankar Raman
Portfolio Development Executive
Industrial Machinery and Heavy
Equipment, Siemens PLM Software

Shankar has over 20 years of experience in the PLM industry and has held various positions at Siemens PLM Software during that time.

He has worked with a number of clients across industries helping them establish their PLM goals and realize the vision across multiple domains.

As part of his role at Siemens, Shankar has built and led Business Development and Solutions Consulting teams and also developed and managed customer /partner relationships.

Shankar has a Master's in Manufacturing Engineering from UMASS Amherst and an MBA from RPI.

About Siemens PLM Software

Siemens PLM Software, a business unit of the Siemens Digital Factory Division, is a leading global provider of software solutions to drive the digital transformation of industry, creating new opportunities for manufacturers to realize innovation. With headquarters in Plano, Texas, and over 140,000 customers worldwide, Siemens PLM Software works with companies of all sizes to transform the way ideas come to life, the way products are realized, and the way products and assets in operation are used and understood. For more information on Siemens PLM Software products and services, visit www.siemens.com/plm.

Headquarters: +1 972 987 3000
Americas: +1 314 264 8499
Europe: +44 (0) 1276 413200
Asia-Pacific: +852 2230 3308

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