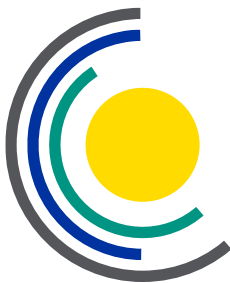


MES and more...



camLine forum 2016 + User Group Meetings



September 14-15, 2016
Hilton Dresden
Germany



camLine forum

September 14, 2016

09:00-18:00

08:15 **Reception and coffee** **Foyer**

Morning Session

09:00 **Welcome** **Congress Saal I**

09:15 **Industry 4.0 in innovation processes** **Congress Saal I**

In most Industry 4.0 demo factories, the focus is still on next-level manufacturing execution, not so much on innovating intellectual processes such as technology development. Recipe Management is the pivotal place where many intellectual development processes physically “hit” reality on the shop floor.

Dr.-Ing. Olaf Herzog

Vice President Factory Integration
Infineon Technologies AG, Germany

09:45 **Continental Automotive specific extensions for equipment performance monitoring** **Congress Saal I**

The Andon Board provides easy-to-read information such as planned and produced units directly at line. Additionally, the overhead display visualizes the line and equipment status in real-time. The Online Process Monitor OPM provides information about the shifts – quality rate, production forecast for each equipment or for whole production lines. It creates transparency on production delays from ongoing and past shifts. A simplified line OEE model allows to calculate and visualize the lines’ Overall Equipment Efficiency. With reporting, production output and availability can be visualized as well as the comparison between lines. Reporting also allows to identify equipment which is the root cause for line downtimes.

Robert Duscher

Team Leader Automation
Continental Automotive GmbH, Germany

10:15 **Case Study Synapse MES mini goes live in four weeks** **Congress Saal I**

Data is the oil of the 21st century! With Industry 4.0, the even more complex production processes will be optimized and the efficiency of equipments can be improved. The use of an MES is one of the building blocks for an efficient analysis and optimization of production systems. This presentation will show that the implementation of InFrame Synapse MES can be accomplished within a short time and what improvements could be achieved.

Frank Böstler

General Manager
camLine Dresden GmbH, Germany

10:45 **Coffee break** **Foyer**

Hidden tracking champion – How to track work station activities via commodity hardware

Congress Saal I

11:30

The digital transformation became a key driver for process innovation at shop floor level. Especially, real-time information are the key to setup and run an effective manufacturing control system. Nowadays, especially small and medium-sized enterprises (SME) have a lack of capabilities to track the WIP, control material flow, and work station utilization. The Camouflage research project addresses these issues. Camouflage monitors activities and material flows at work station level by analyzing the worker's activities in real-time. A Camouflage enabled shop floor keeps track of material flows and work in progress. With Camouflage, there is no longer a need for none value adding activities to report the work in progress, material consumption or quality grades. Camouflage is fully integrated with the InFrame Synapse MES. All data being collected by Camouflage are processed and reported by MES, automatically. The talk introduces the technical components and technologies to create a contactless and markerless work center monitoring and the system integration. Furthermore, an overview on various use cases for Camouflage is given.

Prof. Dr. Dirk Reichelt

Chair of Information Management
Faculty computer science / mathematics
Hochschule für Technik und Wirtschaft Dresden
University of Applied Sciences, Germany

Innovative management of consumables – C-Parts management with RFID solutions

Congress Saal I

12:00

Over several years, Kanban systems are a proven technology to manage C-parts. As next generation of C-Parts management, RFID in combination with cloud-based material management will be deployed in the industry. With this new approach, further improvements in warehouse- and inventory optimization will be possible. Automated processes will ensure the tracking of container states and improve the traceability of the supply chain compared to the traditional C-Parts management approach. In addition, the operating state of each individual shelf, distributed at hundreds of customers of Dresselhaus, can be tracked in the future with LineWorks PULSE providing considerable savings potential.

Lars Prager

Head of Sales
Joseph Dresselhaus GmbH & Co. KG, Germany

Lunch and networking

Foyer

12:30

Afternoon Session

13:45

Fog Computing – a new architecture for data sovereignty between the cloud and the sensor edge **Congress Saal I**

Fog Computing is a new reference architecture for sensor networks at the edge of the cloud. Its basic idea is to process data locally, in complex sensor nodes, gateways, and routers before moving them into the cloud. Thereby, it protects privacy by default and delivers speed (low latency, high bandwidth). Its business perspectives for Germany are tremendous. Because starting from the sensor markets, Germany companies can try to penetrate into the future cloud markets. Fog Computing has a very interesting application area, Robotic Co-Working. The talk reports about a case study of the Chair of Software Engineering for Hanover Fair 2016, WEIR, in which a KUKA LBR iiwa is controlled with a sensor-equipped jacket and glove. The sensor-data aggregation is done via a little fog with an Intel gateway, a laptop, and a robot server. Starting from this example, we show how to program a fog, with a world state-chart and an adaptive software platform, SMAGS (smart application grids).

Prof. Dr. Uwe Aßmann

Professor for Software Engineering
Faculty of Computer Science,
TU Dresden, Germany

14:30

How to improve more quality in a fully automated 300mm factory **Congress Saal I**

In one of its state-of-the-art fully automated 300mm factories, STMicroelectronics is driving successfully quality improvements with a long camLine partnership using several solutions on SPC, recipe integrity, and SQM making camLine key software supplier to STMicroelectronics. The latest project deals with the Supplier Quality Management aiming to increase supply chain quality. In a continuous improvement program, ST Crolles will introduce also automatic OCAP business processes workflow project to ensure and drive consistent OCAP execution across the manufacturing shop floor. This will include links between all Manufacturing information systems, i.e. SPC, FDC, MES, and Recipe Management to identify OOC root cause. In addition, it enables automatic immediate stop on tool, chamber, lot or recipe to prevent scrap. This new project will provide to manufacturing a completely new integrated solution for online data analysis and accurate actions. This presentation will give an overview of IT solutions put in place in STMicroelectronics 300mm plant at Crolles. It will be highlighted how camLine solutions enable quality improvements with an eCAP project.

Hugues Duverneuil

ICT APC, EDA and Automation Manager
STMicroelectronics N.V., France

15:00

eCAP in GLOBALFOUNDRIES Fab1 / Fab8 – Enabling OCAP Automation **Congress Saal I**

In this talk, we will present use cases for eCAP in a state-of-the-art manufacturing line. These use cases will cover classic SPC trouble shooting and actions as well as non-SPC OCAP usage models. The focus will be placed on emphasizing eCAPs capabilities to support OCAP automation and drive user efficiency while also reinstating previously published results on improving OCAP quality as well as OCAP tracking. We will briefly discuss system setup and also talk about roll-out challenges ranging from user training / user acceptance to automation testing and

standardization. The talk will also contain proposals for improving automation and usage of corrective action plan execution for future releases.

Andre Holfeld

Process and Equipment Control SMTS
GLOBALFOUNDRIES Inc., Germany

Coffee break

Foyer

15:30

SQM solution for NXP to monitor & manage supplier quality data in BE manufacturing

Congress Saal I

16:15

With increased presence in the automotive market, Quality FIRST in every element of Product manufacturing has become even more critical for NXP. Using supplier process monitoring and quality data, complemented with NXP inspection & in-line process control information, SQM enables NXP to implement stringent controls & inspection plans for all incoming materials to ensure delivery of high Quality products seamlessly to delight Customers.

A Selvakumar M Arunasalam

Technical Advisor for Global Supplier Development
NXP Semiconductors Malaysia Sdn Bhd, Malaysia

Successful scaling of an R & D Team

Congress Saal I

16:45

Successfully scaling up an R&D team is a challenge, the amount of information and data from machines, planned and executed experiments, and result analysis increases very rapidly as more people become involved. To efficiently coordinate workflows and to reduce the time needed to integrate new knowledge into the production chain, it is important to invest in the structured dissemination and automation of results, documentation, and core knowledge from an early stage. Applied Nanolayers recognized the need to integrate their R&D activities early in their collaboration. After investigating several different solutions, they decided to adopt the XperiDesk Process Development Execution System. This talk will give a brief overview about the challenges and the steps which achieved more seamless collaboration, communication, documentation, and knowledge management.

Dr. Michele Buscema

Application Scientist
Applied Nanolayers B. V., The Netherlands

Summary and Final Words

Congress Saal I

17:15

Heinz Linsmaier

CEO
camLine GmbH, Germany

Demo sessions

Foyer

17:30

Walking tour through historic Dresden to evening event

Semper Opera, Zwinger, Procession of Princes, Dresden Castle, Brühl's Terrace, Frauenkirche, Hofkirche, Stallhof

18:00

Get-together and exchange ideas

Augustiner Dresden

19:00

Exchange ideas and have interesting discussions with attendees and camLine experts. Do not miss this opportunity for informative talks in a laid back atmosphere.



SPACE

User Group Meeting

September 15, 08:55 – 12:00

- 08:15 **Reception and coffee** **Foyer**
- Morning Session**
- 08:55 **Welcome** **Congress Saal I**
- 09:00 **LineWorks STARGATE Version 3.0.0** **Congress Saal I**
You will learn how GLOBALFOUNDRIES has been using LineWorks STARGATE for the past decade and how it has become a critical system in running their day to day operations. Exciting new features and improvements made in Version 3.0.0 will be also be introduced.
Lee Koong Leng
Deputy Director Quality Systems Engineering
GLOBALFOUNDRIES Inc., Singapore
- 09:30 **Graphical reports from SPACE data** **Congress Saal I**
Nils Knoblauch
Product Manager SPACE, camLine GmbH, Germany
- 10:00 **SPACE and the real-life in a low volume high mixture wafer foundry** **Congress Saal I**
X-FAB Dresden started (as ZMD) in 2001 with SPACE 2.3, went through several upgrades, and will migrate to SPACE 7.1 in September 2016. There are many plug-ins and shuttles running as well as eCAP. The strategy is, to extract as much information as possible from the data. Location and variation alone can't detect all process problems, hidden in the data. Most statistical methods like western-electric-rules are meaningless in case of stratified data due to low volume high mixture production. In this presentation, first, some proposals are given concerning low-hanging fruits, such as show sample size, economic control limits, improved variance component model (including L2L, W2W, S2S) or reporting needs. In the second part, the lessons learned from our long use-case since 2001 are presented. It will be discussed which aspects have to be taken into account when setting up SPACE from scratch like concepts of LDS definition, fixed and unified raw-data structures, simple preliminary checks and data enrichment from different sources (WIP, material, pattern densities, tool offsets).
Dr. Matthias Hänisch
SPC Coordinator
X-FAB Semiconductor Foundries, Germany
- 10:30 **Coffee break** **Foyer**
- 11:00 **SPACE Roadmap and Voting** **Congress Saal I**
This session will present the roadmap for SPACE 7.2 and the actual feature wish list collected from customers for SPACE 8. camLine will introduce these features to the audience and offer a voting session to prioritize these items for their realization.
Nils Knoblauch
Product Manager SPACE, camLine GmbH, Germany
- 12:00 **Lunch and networking** **Foyer**



Cornerstone User Group Meeting

September 15, 13:00 – 16:20

Afternoon Session

What's new in Cornerstone 6.1

Congress Saal I

13:00

Nils Knoblauch

Product Manager SPACE, camLine GmbH, Germany

Cornerstone 7 Preview

Congress Saal I

13:20

Dr. Kanglin Chen

Product Manager Cornerstone, camLine GmbH, Germany

Statistical data analysis for LED chip and device production at OSRAM Opto Semiconductors

Congress Saal I

13:50

The LED production at OSRAM Opto Semiconductors consists of the three major process steps epitaxy, chip production, and packaging. During each step, large amounts of logistic, equipment, and measurement data are collected and stored in dedicated databases at worldwide production sites. For analysis purpose, OSRAM has a dedicated software to extract all relevant technical data along the complete process chain. We will show several examples how we use Cornerstone's regression module to link epitaxy equipment parameters with LED performance parameters, e.g. efficiency and emitting wavelength.

Dr. Thomas Bauer

Process Engineer, Production MOVPE Epitaxy
OSRAM Opto Semiconductors, Germany

Coffee break

Foyer

14:20

Determination of the heat transfer coefficient in a binary particle mixture

Congress Saal I

14:50

Heat recovery from redox material is a crucial step to reach a reasonable efficiency in a solar thermo-chemical water splitting process. The investigated heat recovery concept utilizes a spherical heat transfer medium to buffer heat from a particulate redox material. In the proposed study, a heat transfer coefficient was experimentally determined using the method Design of Experiments. Further campaigns were carried out to identify the temperature losses in the experimental rig.

Dipl.-Ing. Jan Felinks

Postgraduate

Deutsches Zentrum fuer Luft- und Raumfahrt e. V.
German Aerospace Center (DLR), Germany

Cornerstone roadmap, discussion, and voting

Congress Saal I

15:20

After the Roadmap for Cornerstone 7, camLine will show the actual feature wish list collected from customers. We will offer a voting session to prioritize their realization.

Dr. Theo Wember

Consultant, camLine GmbH, Germany

Get-together, networking, and demo session

Foyer

16:20



Software Solutions for
Manufacturing Excellence



Participants

- Manufacturing decision makers
- Project, quality, and production managers
- R&D technology development experts
- IT representatives involved in data processing and analyses for process, quality, and production engineering

The attendance at the seminars is free of charge.

Scope

In the two-day event, camLine, along with leading manufacturing partners, will demonstrate how manufacturing application visions are supported by specific software solutions and considerations. You will observe first-hand the presentation of application case details from various industrial manufacturers and their ongoing cooperative efforts with partner camLine. Development highlights of camLine's sophisticated LineWorks Suite, InFrame Synapse, XperiDesk, and Cornerstone software products will also be presented for discussion.

Networking

Ample time will be available for attendees to interact directly with all speakers, senior camLine technical staff, and colleagues from your industry. Refreshments and a buffet lunch will be provided for all attendees.

Venue

Hilton Dresden
An der Frauenkirche 5
01067 Dresden, Germany
info@hiltondresden.com
+49 351 8642-0
www.hiltondresden.com

Contact camLine

info@camLine.com
+49 8137 935-0

Registration at

www.camLine.com

Booking at

<http://group.hilton.com/CamLineForum>