

International Conference

# Automotive Software Development and Open Source



25-26 June 2014 in Munich, Germany

The first and only conference in Germany focusing on open source in automotive!

## Presentations from:



Dr Rainer Kallenbach  
Bosch Software Innovations GmbH



Demetrio Aiello  
Continental Corporation



Reinhard Stolle  
BMW Car IT



Mike Milinkovich  
Eclipse Foundation Inc.

## Highlights

- Round Table – be interactive, creative and innovative at theme-tables
- Networking: Get a face to the name – Icebreaker wall
- Football World Cup match in the evening in a great atmosphere

## Listen to presentations from:

Daimler BMW  
Hella AUTOSAR  
Mentor Graphics  
IBM  
Bosch Software Innovations  
FEV  
Eclipse  
Validas  
fortiss  
ETAS



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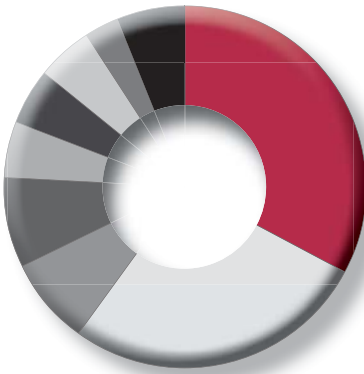


Steffen Lupp  
Vice President Automotive Technology  
Automotive Systems Integration,  
Robert Bosch GmbH



Ralph Müller  
Director Ecosystem-Europe,  
Eclipse Foundation

**Who you will meet:**



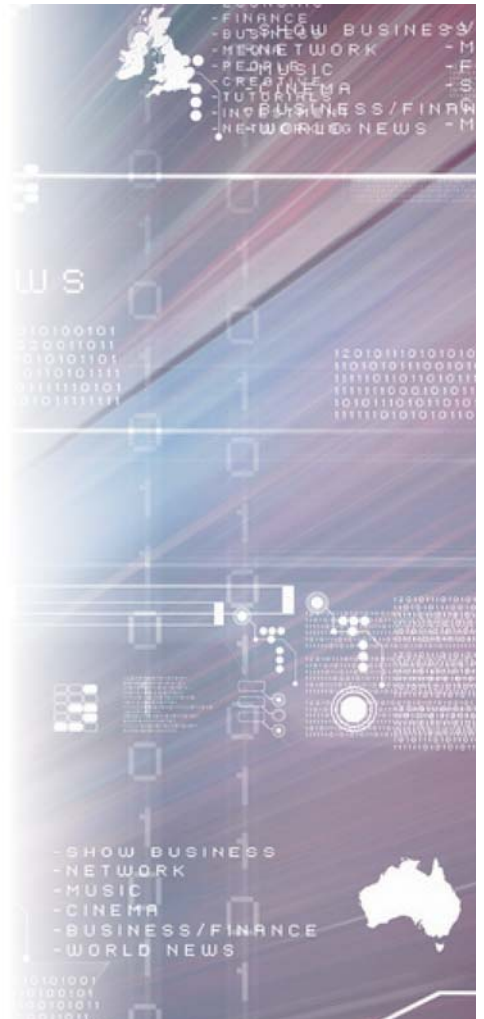
Delegates structure 2013 by industry

■ Software producer	33%
■ Electronics	27%
■ OEM	8%
■ Automotive suppliers	8%
■ Automotive engineering	5%
■ Universities	5%
■ Consultancies	5%
■ Trade	3%
■ Others	6%



Delegates structure 2013 by job function

■ Application development	19%
■ Marketing/Sales	14%
■ R&D	10%
■ General Management	9%
■ Automotive	9%
■ Technology/Production	9%
■ Information management	9%
■ Lawyer	7%
■ Project management	5%
■ Electronics	4%
■ Others	5%



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**Erster Konferenztag, 25. Juni 2014**

8.30 Registrierung und Ausgabe der digitalen Unterlagen

9.00 – 9.15 Icebreaker Wall  
The perfect start to network –  
Please bring you business cards with you!



9.15

**Eröffnung und Begrüßung durch EUROFORUM und den Vorsitzenden**

**Prof. Dr. Dr. h.c. Manfred Broy**, Ordinarius Software & Systems Engineering, Institut für Informatik, Technische Universität München

9.30

**Die Zukunft von AUTOSAR**

- Künftige Innovationen: ein Überblick über Konzepte, die derzeit entwickelt werden
- Zukunftstrends: Schutz, Sicherheit, Car2X Kommunikation und Unterstützung bei komplexen Anwendungen
- Integration von nicht-AUTOSAR Systemen: Interaktion mit GENIVI, Car2Car

**Demetrio Aiello**, stellvertretender Sprecher AUTOSAR Partnership und Leiter des Continental AUTOSAR Center, Continental Corporation

10.00

**Funktioniert die kontinuierliche Integration für Software im Automobil**

- Neue Software-Verantwortung für den OEM
- Der OEM als Software-Integrator
- Typische Integrationskette in der Automobilindustrie
- Konzept der mehrstufigen kontinuierlichen Integration in der Automobilindustrie

**Reinhard Stolle**, Geschäftsführer, BMW Car IT

10.30 Fragen an die Referenten und Diskussion

11.00 Networking-Pause

11.30

**Die Softwareherausforderungen für vernetzte Fahrzeuge**

- Von der automobile Software zur verteilten Software und Cloud-Services
- Software-Architektur, Variabilität und Software-Evolution

**Dr. Christian Prehofer**, Forschungsgruppenleiter, fortiss GmbH

**Conference day 1, 25 June 2014**

8.30 Registration and handing out of digital conference documents

9.15

**Welcome address and introduction by EUROFORUM and the Chairman**

**Prof. Dr Dr h.c. Manfred Broy**, Ordinarius Software & Systems Engineering, Technical University Munich

9.30

**The future of AUTOSAR**

- Upcoming innovations: an overview of the concepts currently under development
- Future trends: safety, security, Car2X communication and support for complex applications
- Integration of non AUTOSAR systems: interaction with GENIVI, Car2Car

**Demetrio Aiello**, Deputy Speaker of the AUTOSAR Partnership and Head of the Continental AUTOSAR Center, Continental Corporation

10.00

**Does continuous integration work for automotive software?**

- New software responsibilities for the OEM
- The OEM as a software integrator
- Typical integration chain in the automotive industry
- Concept of multi-stage continuous integration in the automotive industry

**Reinhard Stolle**, CEO, BMW Car IT

10.30 Questions and discussion with the speakers

11.00 Networking break

11.30

**The software challenges of connected vehicles**

- From automotive software to distributed software and cloud services
- Software architecture, variability and software evolution

**Dr Christian Prehofer**, Research Group Leader, fortiss GmbH





12.00

**Warum „auf Nummer sicher“ programmieren?**

- Warum die veritable C-Programmiersprache es nicht einfach gestaltet, sicherheitsrelevante Codes zu erstellen
- Wie Programmierfehler durch das Abstrahieren von C „by design“ verhindert werden
- Wie implizierte Daten-Annahmen zu einem expliziten Teil des Programmtextes gemacht werden können
- Der Gebrauch von Code-Generierung

**Dr. Darren Buttle**, Senior Produktmanager, ETAS GmbH



12.30 Fragen an die Referenten und Diskussion

12.50 Networking-Lunch

14.00

**AUTOSAR – Sichere Kommunikation an Bord**

- Erkennung von Manipulationen der Kommunikation im Fahrzeug
- Gewährleistung der Authentizität und Integrität der Daten
- Erkennung von Replay-Angriffen

**Dr. Markus Bechter**, AUTOSAR Projektleiter und

**Andreas Kupfer**, Spezialist Fahrzeugprogrammierung und Security, BMW Group



14.30

**Agile Methoden wie Scrum, Kanban und eXtreme Programming sind inzwischen in Automotive angekommen!**

- Branchenumfrage unter Entwicklungsverantwortlichen bei OEM und Zulieferern
- Welche Erfahrungen haben die agilen Pioniere in Automotive gemacht?
- Welche Anpassungen waren erforderlich, um agile Methoden einsetzen zu können?

**Markus Müller**, Principal, KUGLER MAAG CIE GmbH



15.00 Fragen an die Referenten und Diskussion

15.30 Networking-Pause

15.50

**Steuerung von Embedded-Software Projekten mit Hilfe von Prozess-Kennzahlen**

- Definition und Anwendung von Software-Entwicklungsprozessen im Rahmen der Produktentwicklung
- Definition relevanter Kennzahlen für die Software-Entwicklung
- Implementierung der Prozesse und Kennzahlen in der Entwicklungsorganisation

**Dr. Thorsten Molt**, Verfahrensmethoden – Werkzeugelektronik, Hella KGaA Hueck & Co.



16.20

**Automatisierte frontloading in der Softwareentwicklung bei model-basierenden Anforderungen und Dokumentationsverwaltung**

- Model-basierende Softwareentwicklungs-Toolkette
- Gesamtinformation im Modell inbegriffen oder verlinkt, um Automation und dadurch soviel wie möglich die Frontloading zu ermöglichen

12.00

**Why program on the edge of safety?**

- Why the veritable C programming language doesn't make it easy to build safety and security critical codes
- How abstracting from C prevents programming errors by design
- How implicit assumptions about data can be made an explicit part of the program text
- Using code generation

**Dr Darren Buttle**, Senior Product Manager, ETAS GmbH

12.30

Questions and discussion with the speakers

12.50

Networking lunch

2.00

**AUTOSAR – Secure onboard communication**

- Detection manipulated message of on-board car-communication
- Support of authentication, integrity and freshness of data
- Detection of replay attacks

**Dr Markus Bechter**, AUTOSAR Projectleader and

**Andreas Kupfer**, Specialist Vehicle Programming and Security, BMW Group

2.30

**Agile methods as Scrum, Kanban and eXtreme Programming just arrived in Automotive!**

- Industry survey among development managers for OEM's and suppliers
- What for experiences have made the agile pioneers in Automotive?
- What adjustments where necessary in order to use agile methods?

**Markus Müller**, Principal, KUGLER MAAG CIE GmbH

3.00

Questions and discussion with the speakers

3.30

Networking break

3.50

**Control embedded-software projects with the help of process performance indicators**

- Definition and application of software development processes within product development
- Definition relevant indicators for software development
- Implementation of processes and indicators within development organisation

**Dr Thorsten Molt**, Process Methods Tools Electronics, Hella KGaA Hueck & Co.

4.20

**Automated frontloading in software development by model-based requirements and documentation management**

- Model-based software development toolchain
- All information included in model or linked to enable automation and therefore front-loading as much as possible

- Dokumentationsgenerierung durch Simulink
- Anforderungshierarchie und Verfolgung von Anforderungsmanagement (in in-Step) für Simulink Modelle und Code

**Dr. Philipp Orth**, Team Leader Software Methods, FEV GmbH

16.50 Fragen an die Referenten und Diskussion  
17:10 Ende des 1. Konferenztag

- Documentation generation from Simulink
- Requirements hierarchy and tracing from requirements management (in in-step) to Simulink models and code

**Dr Philipp Orth**, Team Leader Software Methods, FEV GmbH

4.50 Questions and discussion with the speakers  
5.10 End of day 1

17.45

**Evening Event**

EUROFORUM invites you to get together with food, drinks and a football world cup match in a relaxed atmosphere where you get the opportunity for good conversation and networking



**Zweiter Konferenztag, 26. Juni 2014**

**Conference day 2, 26 June 2014**



8.15

**Eröffnung und Begrüßung durch den Vorsitzenden**

**Ralph Müller**, Director Ecosystem-Europe, Eclipse Foundation

8.15

**Welcome address and introduction by the Chairman**

**Ralph Müller**, Director Ecosystem-Europe, Eclipse Foundation



8.30

**Innovative Software-Plattformen und Lösungen für das Internet der Dinge (IdD)**

- Internet der Dinge Anforderungen an die Domänen intelligente Mobilität, intelligente Energie, Industrie 4.0, Smart Home und Smart Cities
- Offenheit der Schnittstellen und Plattformen als wichtige Voraussetzung
- Einführung der Bosch IdD Programmreihe als „state-of-the-approach“ für IdD- Lösungen

**Dr. Rainer Kallenbach**, CEO, Bosch Software Innovations GmbH



8.30

**Innovative software platforms and solutions for the Internet of Things (IoT)**

- IoT requirements in the domains smart mobility, smart energy, Industry 4.0, smart home and smart cities
- Openness of interfaces and platforms as key enabler
- Introduction of the Bosch IoT suite as state-of-the approach for IoT solutions

**Dr Rainer Kallenbach**, CEO, Bosch Software Innovations GmbH



9.00

**Was die Automobilindustrie von Open Source lernen kann**

**Mike Milinkovich**, Geschäftsführer, Eclipse Foundation Inc.



9.00

**What the automotive industry can learn from Open Source**

**Mike Milinkovich**, CEO, Eclipse Foundation Inc.



9.30

**Regulierung von Freier Software und Open Source Software**

- Aufzeigen der Herausforderungen durch Nutzung von FOSS auf Unternehmensebene
- Darstellen von Herangehensweisen für Regulierungen und Verantwortungen für die Nutzung von Open Source aus einer Lizenz-Perspektive
- Demonstration einiger realer Beispiele

**Dr. Christian Wege**, Enterprise Architect, Daimler AG

9.30

**Governance of Free & Open Source Software**

- Show challenges of the use of FOSS on an enterprise level
- Present approaches for regulations and responsibilities for the use of open source from a license perspective
- Demonstrate some real world examples

**Dr Christian Wege**, Enterprise Architect, Daimler AG

10.00 Fragen an die Referenten und Diskussion  
10.30 Networking-Pause

11.00

### Eclipse Werkzeug Qualifizierung

- Anforderungen der ISO 26262 an Entwicklungs- und Qualifizierungswerkzeuge
- Eclipse qualifizierung/AutoIWG: Roadmap & Model
- Einsatz von Jubulua & JaCoCo zur Qualifizierung
- Beispiel Qualifizierung eines Inhouse Build System Tools

**Dr. Oscar Slotosch**, CEO, Validas AG

11.30

### Freie Software in Autos – Sicher und geschützt?

- Freie Software vs. Open Source Software
- Anregungen zur Einführung freier Software in Autos
- Was ist Anti-Tivoisierung und wie verändert es das Spiel um sicherheitsrelevante Software
- Hindernisse bei der Einführung von freier Software in das Auto und wie diese überwunden werden können

**Claus-Peter Wiedemann**, Senior Manager, Bearingpoint

12.00 **Interview:**

### Software protection by patents – frequent questions and answers

**Johannes Lang**, Patentanwalt, Bardehle Pagenberg

12.30 Networking-Lunch

10.00 Questions and discussion with the speakers  
10.30 Networking break

11.00

### Eclipse Tool Qualification

- ISO 26262 requirements of development and qualification tools
- Eclipse qualification/AutoIWG: Roadmap & Model
- The use of Jubulua & JaCoCo for qualification purposes
- Example qualification of an in-house build system tool

**Dr Oscar Slotosch**, CEO, Validas AG

11.30

### Free Software in cars – safe and secure?

- Free Software vs. Open Source Software
- Motivations for introducing Free Software into cars
- What is Anti-Tivoization and how does it change the game for safety critical software
- Barriers for Free Software entering the car and how they might be overcome

**Claus-Peter Wiedemann**, Senior Manager, Bearingpoint

12.00 **Interview:**

### Software protection by patents – frequent questions and answers

**Johannes Lang**, Patent Attorney, Bardehle Pagenberg

12.30 Networking-Lunch

13.30 – 14.15 Round Table Session



Join in the discussions at hosted theme-tables. Write, draw or sketch your thoughts and ideas. Switch between theme-tables – take your ideas forward

Interactive: Get involved – discuss topical issues with industry colleagues  
Creative: New ideas and approaches – shared knowledge for a wider perspective  
Innovative: The future at a glance – developing ideas with other experts

14.15

### Open Source Software (OSS) in der Industrieautomatisierung – Chancen nutzen, Herausforderungen meistern

- Kurzeinführung in die OSS-Lizenzwelt
- Vorteile durch den Einsatz von OSS

2.15

### Open Source Software (OSS) in industrial automation – exploit the opportunities, overcome challenges

- Short introduction to the world of OSS licencing
- Advantages through the use of OSS



- Rechtliche Risiken bei der Verwendung von OSS in Produkten
- Dos & Don'ts bei der Implementierung eines OSS-Clearingprozesses

**Thomas Schubert**, Head of Legal Software Licensing, Siemens AG

14.45

#### **Business basierend auf Industriestandards und Open Source**

- Welche Standards sind relevant und werden wie eingesetzt?
- Welche Plattformen stehen zur Verfügung? (Open Source Plattform: Linux, Android und Eclipse)
- Herausforderungen für positiven Return on Investment

**Joachim Langenwalter**, Direktor Automotive, Mentor Graphics Deutschland GmbH

15.15

#### **Integrierte und automatisierte Entwicklung unter Benutzung offener Standards**

- Datenintegration mit offenen Schnittstellen unter Benutzung von OSLC
- Integriertes, automatisiertes System und Softwareentwicklung mit Collaborative Lifecycle Management
- Modelbasierende und auf Metadaten orientierte Prozesse und Methoden
- Compliance (Automotive Spice, ISO26262, AUTOSAR)

**Gerhard Baum**, Vize-Präsident Automotive Industrie Europa, China und Wachstumsmärkte, IBM Deutschland GmbH

15.45

Fragen an die Referenten und Diskussion

16.00

Ende der Konferenz „Softwareentwicklung und Open Source im Automobil“



- Legal risks through the use of OSS in products
- Dos & Don'ts during implementation of a OSS-clearing process

**Thomas Schubert**, Head of Legal Software Licensing, Siemens AG

2.45

#### **Business based on industry standards and Open Source**

- Which standards are relevant and how are they implemented?
- Which platforms are available? (Open Source Platforms: Linux, Android and Eclipse)
- Challenges for a positive Return on Investment

**Joachim Langenwalter**, Director Automotive, Mentor Graphics Deutschland GmbH

3.15

#### **Integrated and automated development using open standards**

- Data integration with open interfaces using OSLC
- Integrated, automated system and SW development with collaborative lifecycle management
- Model based and Metadata centric processes and methods
- Compliance (Automotive Spice, ISO26262, AUTOSAR)

**Gerhard Baum**, Vice President Automotive Industry Europe, China and Growth Markets, IBM Deutschland GmbH

3.45

Questions and discussion with the speakers

4.00

End of the conference "Automotive Software Development and Open Source"

The following exhibitor has already signed up:



**Kugler Maag Cie.** Besser mit uns

Was bringt eine perfekte Performance heute, wenn sie nicht zukunftssicher ist? Damit Ihre Entwicklungsorganisation nicht von der Marktdynamik überrollt wird, bringen wir Mensch und Technik zusammen: Ob ein neuer Entwicklungsstandort aufgebaut oder der PEP agiler werden soll - als Unternehmensberatung unterstützen wir Ihre Elektronikentwicklung ganzheitlich und auf jeder Ebene, von der Managementberatung bei der Zieldefinition bis zum Projektmanagement in der Praxis.

**KUGLER MAAG CIE GmbH**

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Your personal registration code

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International Conference

# Automotive Software Development and Open Source

25-26 June 2014 in Munich, Germany

The first and only conference in Germany focusing on open source in automotive!

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Yes, I want to register \* plus VAT per person [P1106463M012]

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25 and 26 June 2014	€ 1,799,-*	€ 1,999,-*	€ 2,099,-*

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