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Automotive@Eclipse
Community Day

Meet the Automotive@Eclipse Community

1. Welcome, Agenda   5 min   Andy   (15:00)

2. Introduction to openMobility   15 min   Robert

3. Introduction to openPASS   15 min   Tuan

4. Introduction to openMDM   15 min   Christian

5. Introduction to OpenADx   15 min   Andy

Meet the Automotive@Eclipse Community

6. Automotive Top Level Project   15 min   Harald
    - PMC
    - Project Overview
    - Landing Page

7. Introduction to OpenMCx (incl. Demo)   30 min   Josko

8. Walk-In topics   10 min

9. Break   30 min   (17:00)

The Future of Automotive@Eclipse – News, Strategy, Outlook

1. Indy Autonomous Challenge   25 min   Joe Speed   (17:30)
2. Software defined vehicle   25 min   Joe Speed
3. Automotive Edge Computing Consortium AECC (maybe, timing to be adjusted)   25 min   Said Tabet
4. What will come next?   5 min   Andy
5. Walk-In topics   10 min

What will come next?

From Automobiles to Software Defined Vehicles

🕐 Thursday, October 28, 2021 3:30 PM to 4:00 PM

📍 Room 2

▦ IoT & Edge

Beginner

Information

Automotive software is facing a step change – where on top of the established hardware-driven value chains, software is becoming an unfettered field of innovation. This offers an opportunity for establishing cross-brand software ecosystems for in-vehicle software, and a chance to re-think large parts of how this software is created, managed, and operated.

We believe that the only way to succeed at scale is to build the core software stacks in the open source space, in an industry-spanning collaboration between major players from both IT and automotive segments. This is the goal of the Software-defined Car initiative, which aims to become a focal point for skilled attention on creating the next generation of vehicle software.

Speakers

DK **Daniel Krippner**
Enterprise Architect
Robert Bosch GmbH

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What will come next?

- **openGADES** is a customizable, lightweight toolchain for systems and software engineering. It can support you in fulfilling process requirements such as arising from ASPICE and ISO26262.

- openGADES stands for:
  - **open**
  - **G**eneric
  - **A**scii-based
  - **D**ocumentation and
  - **E**ngineering
  - **S**ystem

in preparation

What will come next?

Hybrid System Simulation

- Simulations are at the core of the development process
  - Simulation through product life cycle
  - System to Environment simulation
  - Systems of Systems
  - Virtual and Real System synchronization
- Each industry (aerospace, automotive, defense,…) is developing its own system simulator environment and coupling mechanisms to simulate and model complete systems.
- Simulations may be heterogeneous, involving multiple abstraction levels, mixing 'real' and 'virtual', devices systems and the environment (MIL, SIL, PIL, HIL,…)

	Semiconductors (Accellera)	Robotics	Automotive (OpenADx)	Avionics	Defence & Space
Application modeling	..	..	..	..	..
	Virtual Prototype	..	..	Aircraft -1	..
Simulation engine(s)	TLM / AMS	.. / ..	.. / ..	.. / ..	SMP2 / ..
	SystemC	Gazebo	..	Vistas	..
Infra & Coomm	..	ROS / ROS2	ROS2	..	..
	.. / ...	DDS / uORB	DDS / ...	.. / ,,	.. / ...
Operating system	Linux / Win10	Linux / ..	Linux / ..	.. / ..	.. / ..
	... / ..	RTOS / ..	RTOS / ..	.. / ..	.. / ..

What will come next?

Hybrid System Simulation

- Simulations and model´s cross multiple enterprises and are reused in different contexts.

- Existing standards:
    - are often domain- or industry-specific
    - cannot be combined easily.
    - do not address multi-disciplinary aspect of system simulation and modeling: hardware, software, mechanics, electronics

- There is a need for rationalization/Alignment
    - Select standards for the various abstraction levels and the various activities involved in the PLM
    - Define appropriate interfaces between the selected standards
    - Match MBSE abstraction with simulation models

**Discussions ongoing –
possible homebase for further activities not decided, could be Eclipse / OpenADx**

What will come next?

Birds of a Feather (BoF): Discuss about the Mobility of the future, Automotive and the Software defined future

🕐 Wednesday, October 27, 2021 6:15 PM to 7:15 PM

📍 Room 2

Information

Meet the Eclipse Automotive people in this interactive and informal session.

Discuss the future of:

- Mobility
- Automotive
- Software defined Vehicles

with us. Share your thoughts, ask technical questions, discuss and - most importantly - get to know the Automotive Community.

Speakers

Andy Riexinger
Business Development Manager Open Source
Robert Bosch GmbH

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Thank you!

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