

Eclipse SommR

Eclipse Project Proposal Day

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Authors: Thomas Fleischmann, CARIAD SE
Gerd Schäfer, CTO, ESR Labs

WE
TR/NSFORM
AUTOMOTIVE
MOBILITY



We transform automotive mobility

CARIAD
A VOLKSWAGEN GROUP COMPANY

Agenda



Background and reason

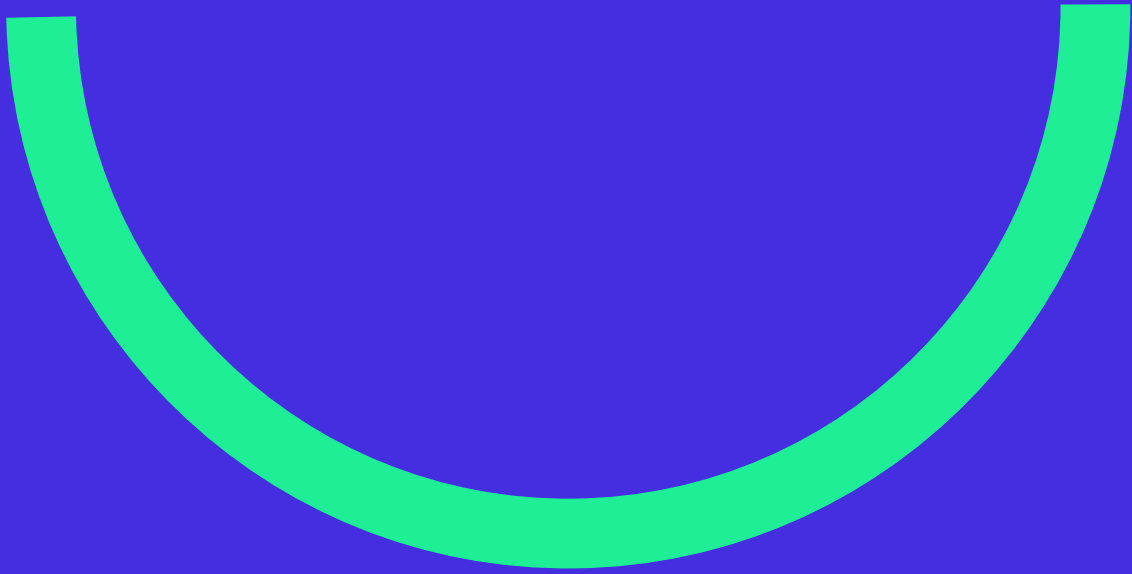


What is SommR – Architecture & Outlook



RUST?

Background



Change ahead

Automotive transformation



New ways of collaboration - enabling our **developers** to make their work more efficient – with opensource

SommR is here and it's yet another SOME/IP implementation:

- [Autosar specification](#)
- <https://github.com/COVESA/vsomeip>



Content of SommR

Scope & High level architecture



Scope of SommR

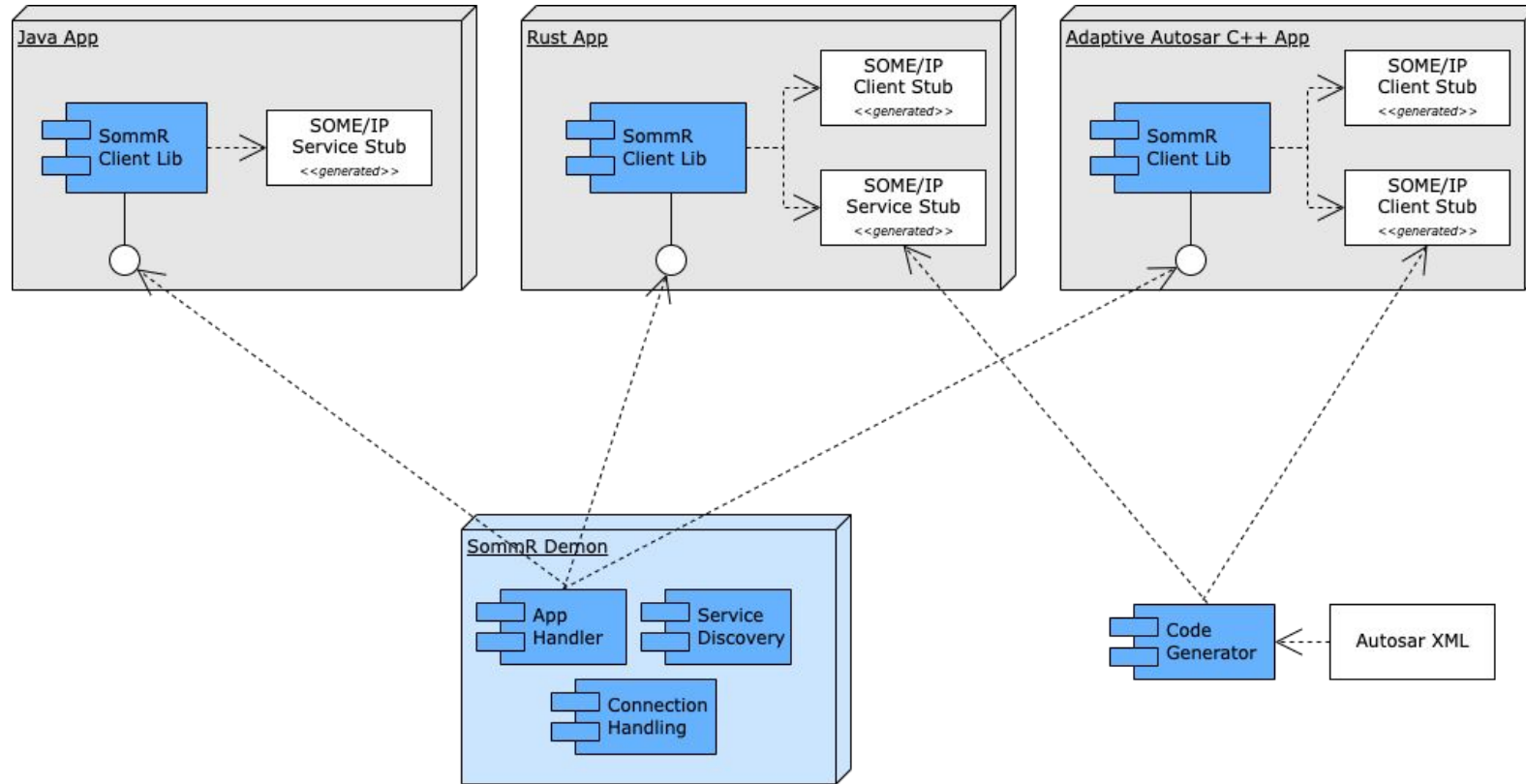
Test driving open source collaboration

Automotive grade SOME-IP Stack for multiple programming languages

- Embedded Linux support
- Tools for developers
- Written in RUST
- For embedded applications in
 - RUST
 - C++
 - Java



High level architecture



Feature Roadmap

- Service Discovery
- Request / Response RPC
- Daemon (Rust) + Client Libraries, Code generator
- Documentation & Examples
- Integration Tests

Initial Contribution

- Support of additional language bindings
- Design guidelines and pitfalls to avoid
- Performance benchmarks
- Generated requirements coverage report, potentially with [OFT](#)

Q1 - 2023

- Feature complete regarding the specification
- Verification and validation suite

Future

Why RUST

Hype or solid technology ?

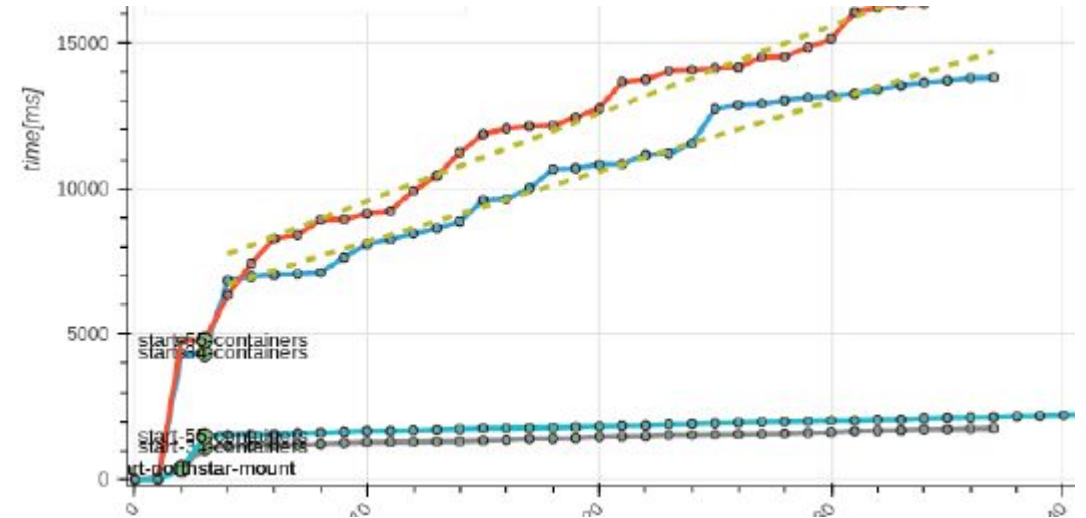


Why RUST

- Clear benefits for robust automotive software where focus is on **security**, connectivity, **performance** and **stability**
- It's not a walk in the park to develop in RUST
- Some details what it means to “... fight the borrow checker ..”

Why RUST

- Fearless concurrency
- Memory safety
- Static type system
- No garbage collection
- Efficient code
- Already existing de-facto standard libraries for networking, asynchronous communication driven by major industry players
- **Data** from real benchmarks on production hardware already shows significant benefits in terms of performance and footprint

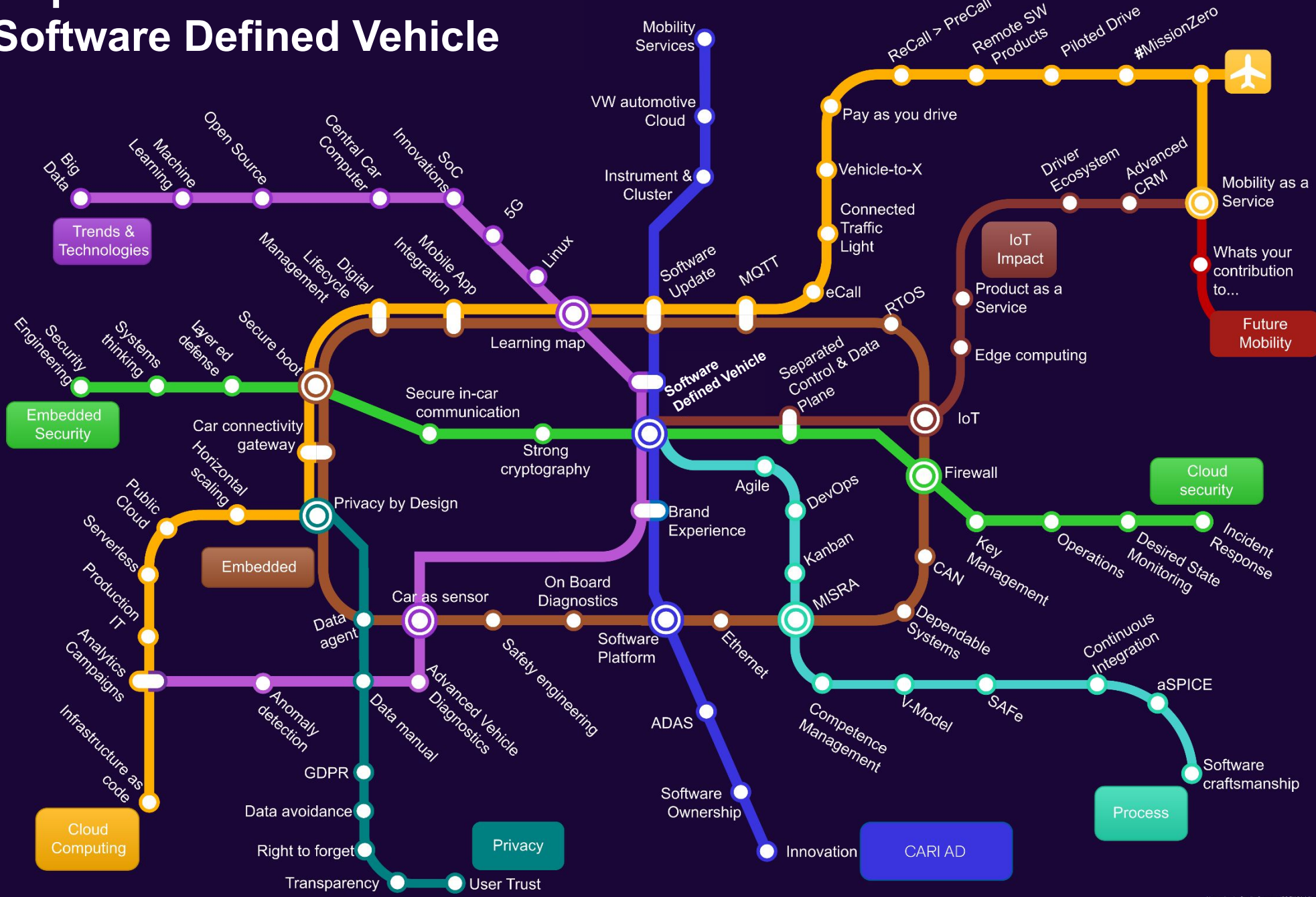




Next Eclipse SDV meeting
with our developers - because
they build the

Software Defined Vehicle.

Map of the Software Defined Vehicle



Licensed under Creative Commons (CC BY-SA 4.0)
Author: Thomas Fiebert, thom@software-defined-car.io

Thank you!

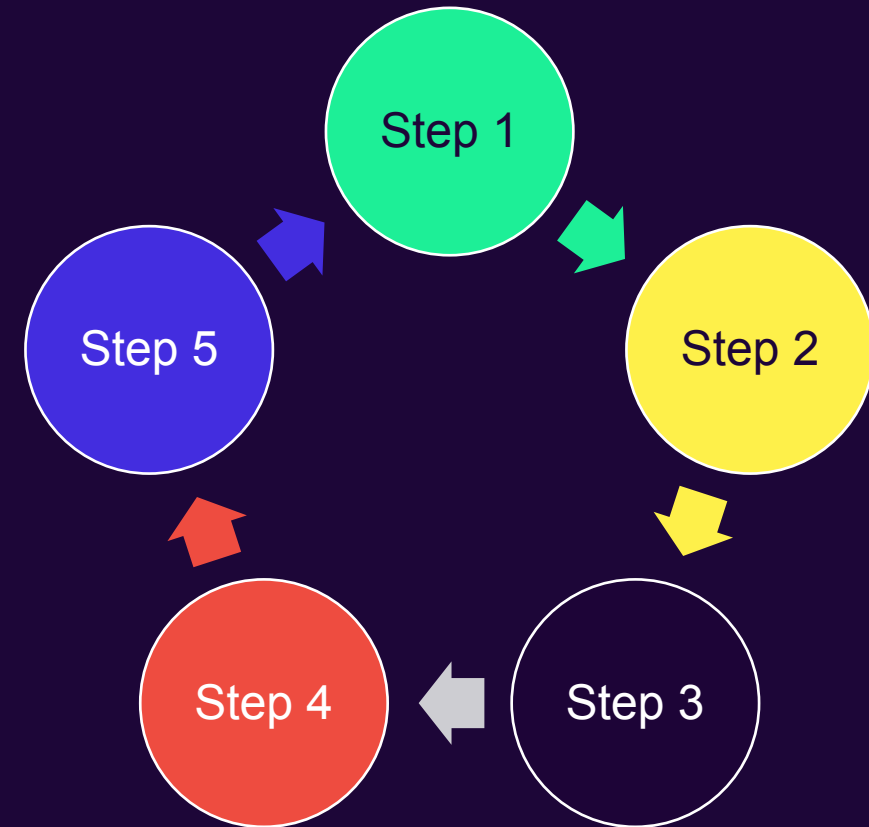
Media/press contacts:
elise.pham@cariad.technology



Process SmartArt

Brand colors

- // Click on the SmartArt
- // Add further step or
- // Delete step
- // Adapt color, text, etc.



SmartArt to visualize e.g. a process cycle. For more SmartArts go to [insert/SmartArt](#).

Graphic

World map



Map to visualize location.

Icons: future green on midnight

Iconic icons to iconize your slides ;)



You'll find a wider range of colors in our intranet brand download area.

Icons: twilight on future green

Iconic icons to iconize your slides ;)



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