Eclipse Developer Console

Eclipse Community Day

Connected Mobility | Lisbon 29th of March
We started our Eclipse SDV journey in September 2022 ...

- 1st Contribution Day
- Telekom HQ in Bonn
... starting our 1st Eclipse SDV Project

Eclipse Ambient Light Services

- interactive lighting concept
- vehicle SW component
- easy to adopt to vehicle platform
- sensor input for vehicle status
- color, brightness and motion commands
- animation scenarios
# The Eclipse SDV WG priorities & T-Systems’ match

<table>
<thead>
<tr>
<th>Eclipse SDV Priority</th>
<th>T-Systems Portfolio Match</th>
<th>T-Systems: Solutions</th>
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</table>
| **Architecture & SW Stack** *(In-Vehicle and Backend)* | - Connected Car BE Building Blocks  
- In-Vehicle SW Development  
- Digital Twin  
- Homologation  
- In-Car Entertainment/5G | **Ambient Light Services** |
| **Cloud-based CI/CD Toolchain** | - Dev Ops Offering  
- Managed Cloud  
- Systems Engineering  
- Remote Test Lab | **Hypercube** *(e.g. DevOps for vehicle SW)* |
| **Vehicle Operations (incl. OTA)** | - Vehicle Operation Center  
- Security Operation Center  
- OTA Features | **Hypercube** *(e.g. Data-enabled insights/services)* |

Ambient Light Services
Hypercube (e.g. DevOps for vehicle SW)
Hypercube (e.g. Data-enabled insights/services)
Here in Lisbon we continue our journey with our 2nd Eclipse Project

#2 Eclipse Developer Console

- Automotive SW-Lifecycle Management
- Core Cube of T-Systems Hypercube
- User Interface
- Track Management
- Scenario Management
The product doesn’t get old. It actually gets better. Just like a fine wine.”

Ola Källenius
Chairman of the Board of Management of Mercedes-Benz AG, on Over-The-Air-Upgradeability
Das iPhone zeigt ein Softwaresupdate für iOS 15.7. Der Updateinhalt enthält wichtige Sicherheitsupdates und wird allen Benutzer:innen empfohlen.
The automotive industry is UNDERGOING A TRANSFORMATION... vehicles will be defined by software.

Vehicles change from mainly hardware based to software centric

OEMs have big challenges in managing software releases and tests

- Testing of vehicle and backend functionalities has a lot of manual efforts using physical vehicles for testing
- Testing new functionalities is becoming more complex and has to be done in shorter time frames
- Costs for physical vehicles and test benches are increasing
- Managing frequent and efficient vehicle software updates require an integrated toolchain from development to release.

- Testing of digital services and continuous improvement of products
- Software defined vehicles require more software updates in future
- The release cycles need become more frequent
Vision: From OTA towards a Continuous SW Deployment Pipeline

Automation, Faster Iterations, Flexible Release Scenarios, Process Transparency

T-Systems Continuous Development Pipeline

**Our Approach**

- **Provide one integrated pipeline from development** to vehicle and realize a seamless and continuous pipeline
- **Break the silos** and bring the information to developers and business
- **Simplify and automate** the processes to reduce cycle time of releases
WHAT is ECLIPSE DEVELOPER CONSOLE about?

Developer Console enables tester and developers to plan, prepare, execute and monitor simulations of scenarios – from vehicle & fleet behavior to services for software defined vehicles.

Testers and Developers can create scenarios as well as simulations, with integrating third-party solutions and services for instance simulators, virtual vehicle repositories or simulations analysis and monitoring tools.
1. Create virtual vehicle (VV) and manage meta data of VV
2. Prepare track, define simulation settings
3. Select virtual vehicles, testbenches and simulators
4. Create a scenario and upload a scenario recording
5. Associate created track with scenario
6. Launch simulation on defined target list of track
7. Execute on virtual vehicles
8. Monitoring and error handling of scenario simulations
ECLIPSE DEVELOPER CONSOLE - User Interface
Features of ECLIPSE DEVELOPER CONSOLE

**Manage Vehicle Tracks**
Group any type of vehicle (e.g. physical vehicle, virtual vehicle, test bench) and push Software and Simulations to the track

**Manage Scenarios**
Upload test scenarios like trip recordings in different kind of protocols e.g. CAN, MQTT, etc

**Manage Simulations**
Run vehicle simulations on tracks with replaying recorded scenarios and integrate into your software defined development tool chain

**Integrate Virtual Vehicles**
Integrate the vehicle simulations you need to trigger your vehicle test sessions

**Simple UI**
Manage all your tracks, scenarios and simulations in an easy to use UI
Thank you!