Safety Assurance, Validation and Certification Panel
AVS 2018

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Chairman of the Board of fka
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Development & Evaluation Process
Holistic Tool Chain for safe and exciting Automated Driving

1. Assess the Driver Experience before Technology exists
2. Develop & Calculate virtual Effectiveness
3. Experience & Optimize as Expert in-the-Loop
4. Validate Acceptance & Effectiveness
5. Assess Controllability of Failures
6. Validate Functionality & Controllability
7. Evaluate & sign-off Functionality & Acceptance
8. Monitor and Learn offboard
9. Check improvements and update functionality

1. Multi-scale Simulation
2. ika Driving Simulator
3. Vehicle Platforms
4. ATC Intelligent Proving Ground
Development & Evaluation Process
Tool Chain forms fundament for “circle of relevant scenarios”
Development & Evaluation Process
Contributions by fka

Idea

Driver Performance Models including valid Parameters

Concept Experience

Concept Evaluation & Optimisation

Assignment

Logical Scenario Space in PEGASUS

Scenario database in PEGASUS

Relevant Traffic Scenarios

Scenario extraction from FOT in PEGASUS

Scenario Extraction from other sources

Continuous Completion

Reference and new Scenarios

Exact description of Scenarios

Frequency & Type of incidents

Accidents as reference

Real traffic

SOP

Field operational tests

R&D supporting AD conception

R&D supporting AD verification and validation

FKA Driving Simulator

Component Development

Software in-the-Loop

Hardware in-the-Loop

Component Development

Validation Tool

“Time-Machine”

Validation Tool

Scenario database in PEGASUS

R&D supporting AD conception

R&D supporting AD verification and validation

FKA Driving Simulator

Development & Evaluation Process
Contributions by fka
Contact

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WHAT

needs to be shown? ➔ Level of Safety

HOW
can it be shown?

Development & Evaluation Process
Tool Chain forms fundament for “circle of relevant scenarios”

Relevant Traffic Scenarios

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Continuous Completion

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