

VVMethods Mid-term Event

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824309.



Outline

✓ The HEADSTART project

- ✓ Overall HEADSTART Methodology
- ✓ Scenario selection and allocation from databases
- ✓ Conclusions and next steps



HEADSTART project facts

- Call identifier: ART-01-2018
- ✓ Type: RIA
- ✓ **Duration:** 01.2019 12.2021 (36 months)
- ✓ Budget: 6M€
- Consortium: 17 partners
- Coordinator: Applus IDIADA, Mr. Álvaro
 Arrúe, Project Manager

- Dissemination Manager: ICCS, Dr. Angelos
 Amditis, Research Director
- ✓ Website: https://www.headstart-project.eu
- ✓ Social media:
 - / HEADSTART_EU
 / HEADSTART-PROJECT
 / HEADSTART project
 / @HeadstartEUproject



HEADSTART Consortium

- ✓ 7 research centres
- ✓ 2 Technical services
- ✓ 3 Euro NCAP laboratories
- ✓ 4 OEMs
- ✓ 2 Tier-1s
- ✓ 3 coordinators of H2020 ART calls



HEADSTART

I HEADSTART

Project's Objectives

HEADSTART will define testing and validation procedures of CAD functions including:

- its key enabling technologies (i.e. communication, cyber-security, positioning)
- by cross-linking of all test instances such as simulation, proving ground and real world field tests
- to validate safety and security performance according to the needs of key user groups (technology developers, consumer testing and type approval)



17/3/2022

HEADSTART



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1. IDENTIFY





2. Harmonise

Harmonisation of existing testing and validation approaches





14/12/2021

Final event



3. Define and develop



Define and develop test, validation and certification methodologies and procedures for CAD functions.



Truck Platooning



Highway pilot



Traffic Jam Chauffeur





4. Demonstrate



Demonstrate the developed methodologies, procedures and tools through the testing.





5. Reach consensus

Create consensus through the creation and management of an expert network.



ECSEL JU

Other relevant initiatives

citv

UNIVERSITY OF MICHIGAN

EATA

European Automotive



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Link VVMethods and HEADSTART

- Both projects are defining the need of scenario databases that contain all the scenarios to be taken into consideration for verification and validation activities.
- ✓ HEADSTART has analysed the need of integrating new KETs (Key Enable Technologies) for connectivity and positioning in order to enrich the scenarios with new parameters to be considered for validation purposes.
- Scenario selection and allocation part of HEADSTART methodology has a direct link with VVMethods because both project use those databases as the source to generate test cases.











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- Create test cases (optional: enrich them with KET parameter)
- Allocate test cases to testing methods







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Conclusions and further work

- CCAM systems must prove to be reliable in every possible driving scenario, that is, building a strong safety argumentation.
- Standardization is in infancy, as many standards are under development or have been very recently published and still need time to be synchronized and established as a common practice.
- Scenario databases are another issue tackled by several initiatives and projects, providing silo solutions. A single concrete approach should be used, dealing with scenarios of any variations, including the creation, editing, parametrization, etc. in a universally agreed manner.
- Therefore, it becomes necessary to move to the next level of standardization, in the concrete specification and demonstration of a commonly accepted Safety Assurance Framework (SAF) for the safety validation of CCAM systems.
- Future initiatives from the European Commission inside HORIZON 2021 program are moving in this direction and will tackle all these challenges.

SUNRISE

✓ SAFETY ASSURANCE FRAMEWORK FOR CONNECTED, AUTOMATED MOBILITY SYSTEMS





HEADSTART Partners



Thank you!

Any questions?

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