PRYSTINE

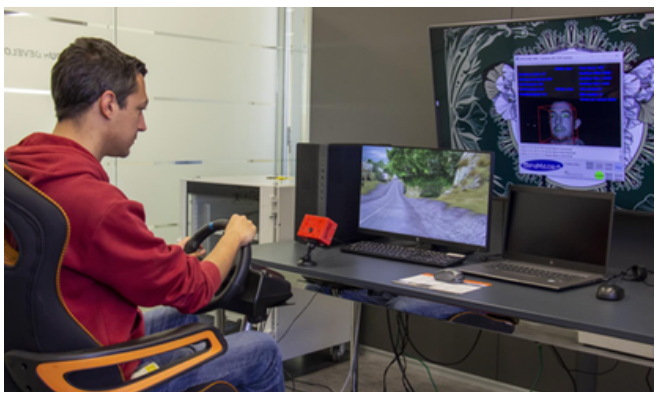
Programmable Systems for Intelligence in Automobiles

AEIT Automotive 2020

PRSYTINE project was invited as one of the most relevant and well-known projects in the ADAS of the ECSEL JU, the most extensive European Research program in Electronic Components and Systems, to the AEIT Automotive 2020 virtual conference held on November 18th through 20th.
In a panel session, special attention was given to Automotive applications that are the topic of a dedicated Lighthouse Mobility.E initiative. This panel session helped coordinate the initiative's research projects.

Successful systems validation

During the last quarter of 2020 IDIADA carried out validation activities in simulation environment of all the systems interacting with PRYSTINE project demonstrators.
In this demonstration, a bus from Irizar and a passenger vehicle from CSIC showcased driver-machine interaction and vehicle cooperation in an urban-like scenario. The final demonstration will take place at IDIADA's test tracks in 2021.



PRYSTINE is funded within the Electronic Components and Systems For European Leadership Joint Undertaking in collaboration with the European Union's H2020 Framework Programme (H2020/2014-2020) and National Authorities, under grant agreement n° 783190.

3rd Consortium Conference

On March 3rd PRYSTINE project had its 3rd full consortium conference. Conference was held online and was dedicated to updating consortium members on the current project status and ongoing activities.

EUCAD21

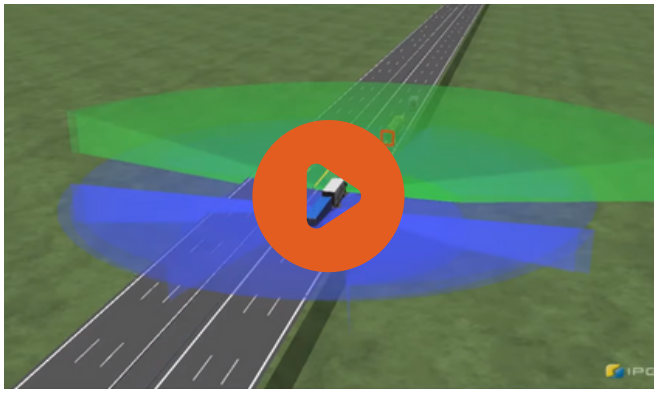
PRYSTINE was presented in virtual event EUCAD21 with the online booth, videos and presentations. Online event was held on April 21st and 22nd. All guests were welcome to visit the Virtual exhibition and explore PRYSTINE project booth with its entertaining project videos!

Video 1: PRYSTINE SC2 Demo 2.2 Drive by Wire Car.

A novel approach to software component integration: developed COMPAGE framework (fail-operational system component management framework) and AI-based algorithms capable of identifying faulty sensors by analyzing data of different types, e.g. LIDAR, Radar, cameras.

Video 2: PRYSTINE SC2 Demo 2.3 Data Fusion and Fall back.

A fully integrated security engineering process for realizing secure autonomous driving and a trust model for evaluating the trustworthiness of sensors data with the data fusion module for improving the accuracy of object detection and tracking.



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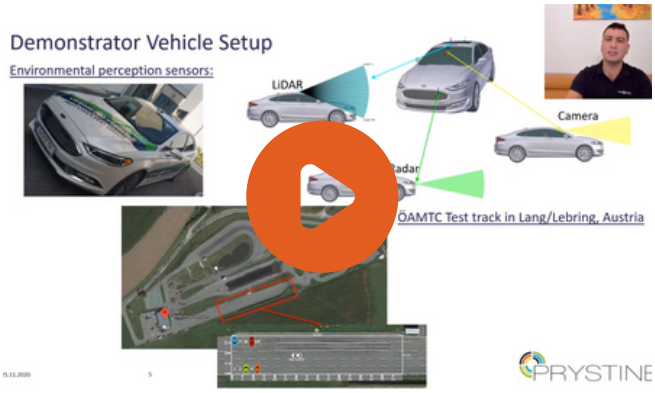
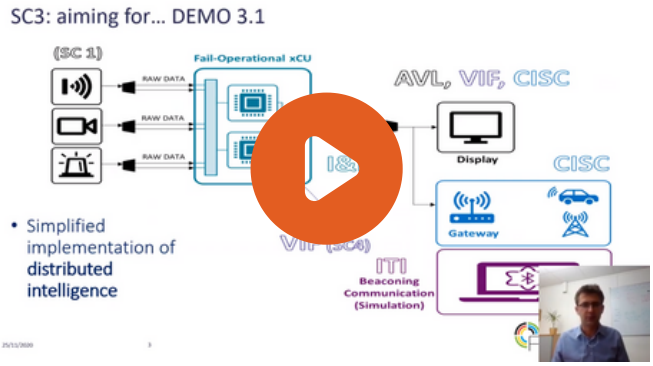
Video 3: PRYSTINE SC2 Demo 2.4 Passenger Vehicle for Low Speed Autonomy.

Fusion algorithms and perception components to be utilized by SAE Level 3+ equivalent autonomous parking and low speed autonomy solutions (related to Automated Parking Vale Systems) providing fail-operationality and robustness by the utilization and fusion of multiple sensor sources including cameras and Radar.



Video 4: PRYSTINE SC3 Demo 3.1, 3.2, 3.3.

- Demo 3.1 E/E architecture demonstrator for automotive electronics enabling AD.
- Demo 3.2 Simulation, development and validation framework for fail-operational sensor-fusion E/E architecture
- Demo 3.3 Dynamically shaped, reliable mobile communication



Video 5: PRYSTINE SC7 Demonstrators 7.1, 7.2, 7.3

- Demonstrator #7.1: Shared control to study driver interaction with automated vehicles considering the driver state and the driving environment (DiL Simulator).
- Demonstrator #7.2: Traded control to study automatic transitions between different levels of automation in complex environments, while cooperating with a bus for enhanced perception (V2V).
- Demonstrator #7.3: Autonomous control to study AI-based decision algorithms for highly automated vehicles in highway and urban scenarios, considering a traffic state prediction network.

Upcoming events

Stay tuned:

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