

PROJECT

PEGASUS

Project for the establishment of generally accepted quality criteria, tools and methods as well as scenarios and situations for the release of highly-automated driving functions

Projekt zur Etablierung von generell akzeptierten Gütekriterien, Werkzeugen und Methoden sowie Szenarien und Situationen zur Freigabe hochautomatisierter Fahrfunktionen

Funding: National (Germany)

Duration: Jan 2016 - May 2019

Status: Complete



Objectives:

PEGASUS delivers the standards for automated driving. With the PEGASUS joint project, promoted by the Federal Ministry of Economics and Technology (BMWi), key gaps in the field of testing will be concluded by the middle of 2019, up to the release of the highly-automated driving functions.

The dream of many car drivers appears like this: while driving, one simply switches to the autopilot, sits back, reads, The technical requirements have already been met at the present moment. However, until these automation systems can actually be used on the roads, a million times, there are still many questions that have to be clarified. In particular: what are the requirements for self-propelled vehicles? How can the safety and reliability of these systems be proven?

And not to forget: as nice as the future vision of self-driving cars might be – without people behind the wheel, it will not work. In particular, the transfer of responsibility from the driver to the automated system comes with high demands, since the humans no longer have to continuously monitor their driving task and can devote themselves to other activities. But what role will the human factor play in the future? What does technology have to guarantee? And how can optimally shape the interplay between humans and technology? In such situations, there is an enormous demand for research, when it comes to bringing highly-automated vehicles, quickly and safely on the market.

Standards for the safeguarding of highly-automated vehicles

In order for such functions to be approved, new and standardized quality standards and methods must be developed in the coming years – through the close cooperation between the research and industry fields. This is what the PEGASUS joint project stands for: project for the establishment of generally accepted quality criteria, tools and methods as well as scenarios and situations for the release of highly-automated driving functions. The objective is to develop a procedure for the testing of automated driving functions, in order to facilitate the rapid implementation of automated driving into practice.

The German automotive industry maintains the opinion that a standardized procedure in the field of testing and experimenting is necessary, for the securing and approval of higher levels of automation. For this reason, the PEGASUS project has brought together automotive companies, suppliers, small and medium-sized companies as well as research facilities. PEGASUS will develop, until 2019, a generally accepted and standardized procedure, for the testing and approval of automated driving functions. The 17 project partners from the science and industry fields define hereby a state-of-the-art technology for the safeguarding of highly-automated driving and demonstrate the development in a practical manner, using the example application of the highway chauffeur, which takes over the highly-automated driving on the highway.

Overview of the main goals:

- Definition of a standardized procedure for the testing and experimenting of automated vehicle systems in simulation, on test stands and in real environments.
- Development of a continuous and flexible tool chain to safeguard the automated driving.
- Integration of the tests in the development processes at an early stage.
- Creation of a cross-manufacturer method for the safeguarding of highly automated driving functions.

Other funding sources: Bundesministerium fur Wirtschaft und Energie

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STRIA Roadmaps: Cooperative, connected and automated transport

Transport mode: Road transport

Transport sectors: Passenger transport

Transport policies: Digitalisation

Geo-spatial type: Other