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The PANORAMA project will receive the "ITEA Award of Excellence 2022 for Standardization" in September. The goal of the EU project was to accelerate the design of heterogeneous systems through efficient collaboration of various hardware and software technologies in distributed teams. Read more about Vector's role in the project and how developers of ECUs benefit from the powerful Vector software TA Tool Suite here.

PANORAMA is looking for solutions to key challenges in the automotive industry. Over a period of three years, Vector supported the EU project, which ended in April, with its expertise as an embedded software specialist.

PANORAMA: Boosting design efficiency for embedded systems.

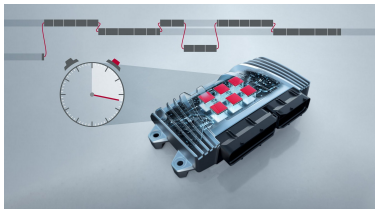
In the field of software, the automotive industry is currently facing three major challenges: Electrification, automation, and high-level networking. Extensive adjustments in the design of E/E architectures and in the integration of software and hardware are therefore to be expected.

Three central points are crucial here:

- The functionality of heterogeneous, i.e., specialized and networked software (e.g., powertrain, assistance, multimedia, ...) are integrated in a central hardware platform.
- The use of heterogeneous, i.e., specialized and networked hardware (e.g., AI accelerators to implement Deep Learning) becomes necessary.
- New development processes will be designed collaboratively with heterogeneous partners (OEM, tier-1 and tier-2 suppliers), in which software providers, domain experts and service providers will be more involved in the future.

PANORAMA offers possible solutions for this by creating an open ecosystem of software for efficient and collaborative design. Together with other partners, Vector contributed its experience as an embedded software specialist to develop solutions for the ambitious goals of the EU project.

In particular, Vector was able to contribute its extensive expertise in the standardization of interfaces. For example, two interfaces of the powerful Vector software TA Tool Suite were published, enabling participating processes to be connected seamlessly without having to rely on manufacturer-specific interfaces. In addition, Vector extended the open source AMALTHEA platform of the Eclipse APP4MC project and published the specification of the internally used trace format BTF.



TA Tool Suite uses system descriptions AUTOSAR and AMALTHEA as data sources.

The interfaces are used with the Vector software TA Tool Suite. The software enables in-depth analysis of the timing behavior of an ECU and provides interfaces to common exchange formats. The options TA.Design and TA.Simulation use the system descriptions AUTOSAR and AMALTHEA as data sources. TA.Inspection bases its analysis on trace log measurements from various debugger and profiling providers, as well as on Vector's VX1000 measurement and calibration hardware, which uses the BTF data format, among others.

PANORAMA was organized by a consortium of leading companies, research institutes and universities with extensive expertise in embedded systems and software engineering. The European Union funded the project as part of the "Information Technology for European Advancement (ITEA)" research and innovation program. The project is supported by the German Federal Ministry of Education and Research (BMBF).

Read Project Profile

Website PANORAMA Project

More Information about ITEA Award

Categories: AUTOSAR Classic | ECU Calibration | Embedded Software & Systems | Measurement Technology