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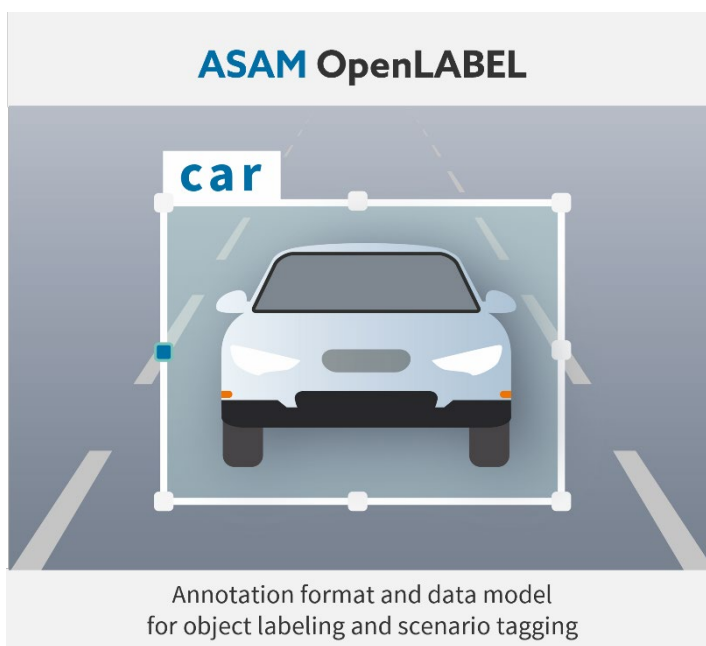
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Press Release

ASAM Releases World's First Standard for Multi-Sensor Data Labeling and Scenario Tagging

ASAM OpenLABEL is the first standard to annotate multi-sensor data and scenarios. The standard defines a data model and data format to label multi-sensor data and to tag scenarios. There are fields of application for ASAM OpenLABEL. However, currently there is a focus on the development and validation of driver assistance systems and automated driving functions.



Höhenkirchen, Germany (Nov 22, 2021) –

To enable automated driving, a vehicle must be able to perceive its environment and process the data it collects.

Machine learning techniques are typically used for this purpose. The training of algorithms requires high-quality annotated data to ensure reliable functioning. Core challenges here are both the large volumes of data that are required

and their unambiguous labeling so that data can be reused, shared and results can

be reproduced. Some organizations already offer open databases and make data sets available to the industry. However, they usually use their own taxonomies, formats, and data models, making it difficult to share and reuse the data. This results in the following challenges:

- The data sets of the different organizations can only be compared, used or shared to a limited extent.
- Annotated data sets can only be reused to a limited extent.
- Maintenance and updating of the annotations are difficult.
- This has a negative impact on the quality of the annotations.

The unambiguous labeling of data is therefore an essential prerequisite for shared use and thus for the safety of autonomous driving systems. However, it is often associated with enormous effort and considerable costs.

ASAM OpenLABEL is the first standard to provide a solution: The standard specifies a data model and format for structuring and organizing information to label different types of sensor data (e.g., from cameras, lidar, radar, etc.) in so-called "labels". In addition, ASAM OpenLABEL defines a set of standardized "tags" as well as a data model to categorize and organize scenarios.

To guarantee an unambiguous designation of labels, tags and other description elements, ASAM OpenLABEL provides for the use of ontologies. Although ASAM recommends the use of ASAM OpenXOntology (release of the standard in December 2021), ASAM OpenLABEL can also be used with other ontologies and taxonomies.

Experts see great opportunities for this standard to lead to a fundamental improvement in the quality of data sets and to an increase in the efficiency of development cycles.

“ASAM OpenLABEL is the first-of-its-kind standard, and definitely not a conventional one. It is underpinned by an entirely novel approach to labeling that enables a much more efficient way to manage and maintain labels and their semantics through the

use of ontologies. We are confident that OpenLABEL will significantly help the industry in iterating faster, sharing data more efficiently, and ultimately deploy safe ADAS and AV systems sooner” - Nicola Croce, Deepen AI, project lead of the standard development group “ASAM OpenLABEL V1.0.0.”

“ASAM OpenLABEL is a new standard that standardizes multi-sensor data labeling as well as scenario labeling and facilitates interchangeability of data sets. The standardized format and data model, as well as the use of ontologies as a basis, will lead to a noticeable increase in the quality of annotated data sets, contributing to the safety of autonomous driving. As this is the first standard in the world to address annotation, we are confident that ASAM OpenLABEL will soon be a widely used and trusted standard in the industry.” – Peter Voss, Managing Director ASAM e.V.

ASAM OpenLABEL was developed by an international working group of experts from 22 ASAM member companies. They all contributed with their expertise to ensure that the new standard meets the requirements and expectations of the industry.

Potential users of ASAM OpenLABEL include specialists in machine learning, perception and/or computer vision, data labeling, test processes, systems, validation and verification of ADAS and AV, functional safety, and simulation.

About ASAM e.V.

ASAM e.V. (Association for Standardization of Automation and Measuring Systems) is actively promoting standardization within the Automotive Industry. Together with its currently more than 360 member organizations worldwide, the association develops standards in the area of automotive electronic engineering that define interfaces and data models for tools used for the development and testing of electronic control units (ECUs) and for the validation of the total vehicle. ASAM is the legal representative of more than 30 standards that are applied in the automotive industry worldwide.

www.asam.net

Further Information

ASAM OpenLABEL: <https://www.asam.net/standards/detail/openlabel/>

Webinar ASAM OpenLABEL (recording): <https://www.asam.net/conferences-events/detail/webinar-asam-openlabel-v100/>

ASAM OpenXOntology: <https://www.asam.net/project-detail/asam-openxontology/>