25 years of ASAM e.V.



Dr. Ralf Nörenberg

ASAM e.V. Board of Directors HighQSoft GmbH June 28th, 2023 Tokyo, Japan



The beginning 25 years ago



Foundation of ASAM e.V.

The association ASAM e.V is founded on Dec. 1, 1998 in Stuttgart, Germany, on an initiative of German car manufactures AUDI, BMW, Daimler, Porsche VW.

ASAM e.V. is the follow-up organization for all ASAM and STAUMECS activities. During the foundation meeting, 26 companies joined the new association.

The first ASAM Board of Directors consists of:

- Mr. Karl-Heinz Hönes (DaimlerChrysler AG; Chairman)
- Mr. Pölsler (Porsche AG)
- Dr. Langemack (Volkswagen AG)
- Mr. Jürgen Döring (rd electronic gmbh)
- Dr. Wilfried Melder (GfS)

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ASAM e.V. becomes an international organization including members from Japan and the US very quickly!



2000

Membership

ASAM attracts its first international OEM members:

- DENSO Corporation (Japan)
- Renault SA (France)
- Ford Motor Company (USA)

Cooperation with ISO

First cooperation with ISO is initiated.

ASAM compliant products

First certified ASAM products are being launched.

1999

ASAM is taking up business

The office of ASAM e. V. (registered association) locates to the Munich area. Hans-Georg Swolana is appointed ASAM Business Manager. The new organization is fully operational as of early 1999.



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>> ODS was one of the first standards developed by ASAM, reaching back as far as the early 1990s.



2000

ASAM PACKT DIE DATEN

SCHNITTSTELLEN FÜR DIE AUTOMATISIERUNG UND DIE MESSTECHNIK

Technik und Wissenschaft macht bei der Me8- und utomatisierungstechnik Produktzyklen ergeben zunehmens komplexere Aufgabenstellungen, die in den unterschiedlichen Versuchsumfeldern hochspezialisierte Lösun gen verlangen. Daher wächst nich nur die Anzahl, sondern vor allem auch die Vielfalt individueller und häufig inkompatibler Meßsysteme. Durch diese Entwicklung wird die Kopplung verschiedener Systeme und der Austausch von Daten zwi und der Austausch von Daten zwi-schen ihnen immer schwieriger. Auf-wendige Software und große Kosten sind die Folge. Um dieser Tendenz entgegen-

zuwirken, haben einige Automobil-hersteller (Audl, BMW, Mercedes Benz, Porsche und VW) die Initiative ergriffen und den "Arbeitskreis zur Standardisierung von Automatisierungs- und Meßsystemen" (ASAM) gegründet. Ziel dieses Arbeitskreises ist die Entwicklung eines flexiblen Systems, das die unter-schiedlichen Anforderungen ver-schiedener Testsysteme berücksichdie zu standardisierenden Schnittstellen bestimmt. Neben den Initia-toren sind auch Zulieferbetriebe, Software- und Gerätehersteller in drei Arbeitsgruppen damit beschäftigt, diese Schnittstellen zu definie-

wohl in ASAM-G, der Arbeitsgruppe, die sich mit der "Geräteschnittstelle" beschäftigt, als auch in ASAM-ODS

gungen vorliegen, hat man sich bei der ODS-Arbeit zuerst auf die Delinich date informiert darüber, in welchem ton einer gemeinsamen Basilidaten- From diese Date nagelegt sich unwerdenische Abstaguspen

ren werden auf eine gemeinsame Basis abgebildet. Dadurch wird der Grundstein für die Austauschbarkeit

der Versuchsdaten gelegt.
Neben diesem Datenmodell stellt ASAM-ODS weitere Schnitt-stellen zur Verfügung. Über eine Applikationsschnittstelle, die Basisfunktionen in Form einer Klassenbi-Arbeitsgruppen dennit deschaft i, diese Schnittstellen zu definie-bie GfS ist von Anfang an so-hi in ASAM-O, der Arbeitsgruppe, Diese Schnittstelle basiert ihrer-

seits auf einem Client/Server-Protokoll, mittels dessen die elementaren tätig. ODS steht für "Offline-Daten-Schnittstelle" und setzt sich mit allen de Ablagesystem weitergeleitet wer-Scrimisseler und setzt sich mit allen de Ablagesystem verlengeleiser werplaten ausernander, die über die Verlsuchsdruchführung hinaus erhalten bleben, wie z.B. Meßdaten, Versuchts- und Prüffingsbeschreibungen. Da Daten und Parameter in den verschiedenen Versuchsumfeldern enbank- und Dateisysteme, die oft in sehr unterschiedlichen Ausprä- noch nicht dem ASAM-Standard

mögliche Applikationsdatenstruktu- ODS ein Datenaustausch-Dateiforschen verschiedenen Rechnern und Format) soll eine weltweit einheitli-che Basis für den Austausch von Daten geschaffen werden. Dabei sei sen ist, sondern auch zum Daten austausch mit "Fremdapplikationen

> mittlerweile so weit fortgeschrit ten, daß in Kürze die ersten Prototypen in Betrieb genommen werder

In der Entwicklung von DIAdem® wird ASAM selbstverständlich voll

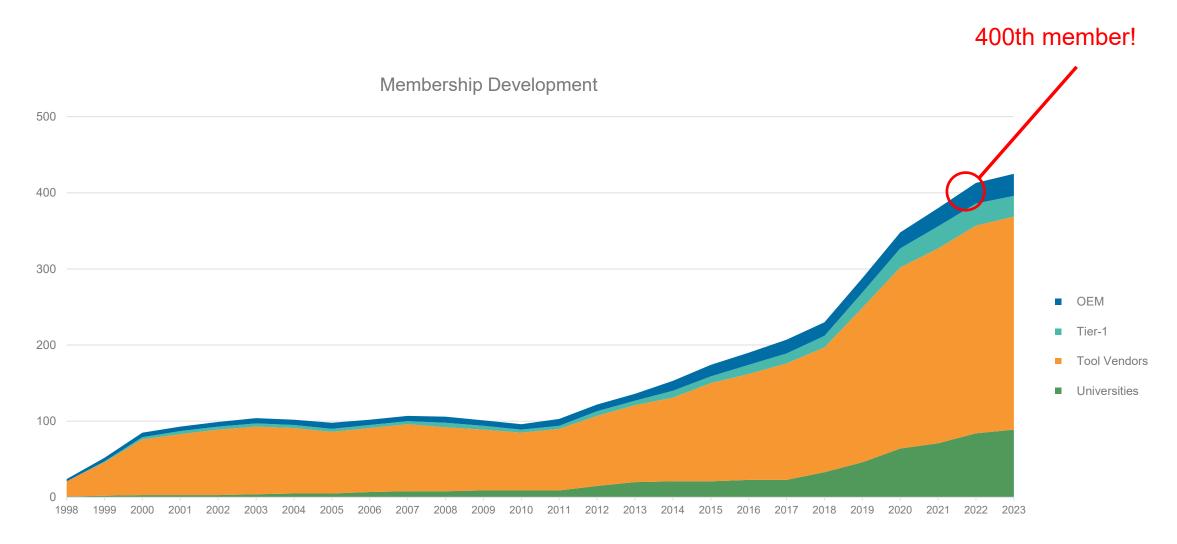
Individualität aus dem Baukastor Columbus/Dengler; DECKBLATT 10/94. 1995

First publication from an ASAM interest group!



ASAM membership development

Membership development over the past 25 years.



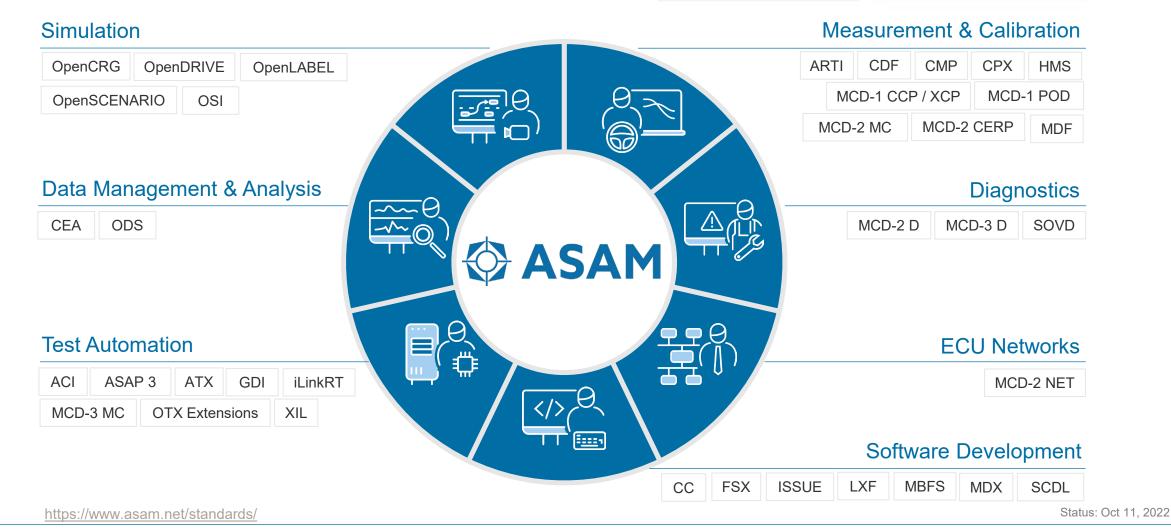


ASAM standards portfolio

ASAM is currently active in 7 domains

7Domains

37
Released Standards



ASAM e.V. standards are standards that shaped the industry

A selection of widely spread and internationally implemented standards

ASAM MCD-1 XCP

Standard that defines a bus-independent communication protocol to connect ECUs with calibration systems

ASAM MCD-2 MC

Description format of the internal ECU variables used in measurement and calibration

ASAM MDF

Standard for writing data from acquisition system

ASAM ODS

Standard for measured data storage

ASAM OTX

define a language and exchange format for the specification of executable test sequences.

ASAM XIL

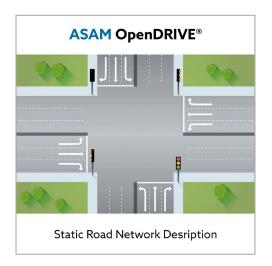
An API standard for the communication between test automation tools and test benches.



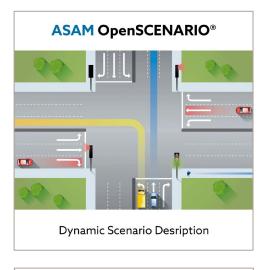


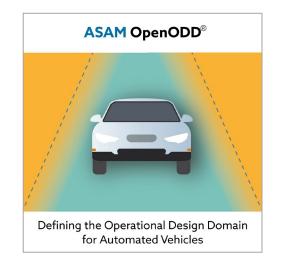
With openX standards a new era of ASAM e.V. standards is ahead

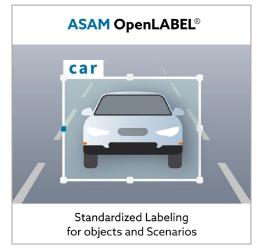
Standards are going road-side!

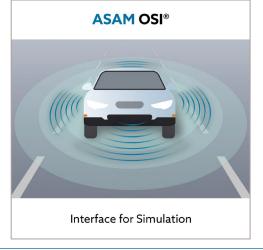


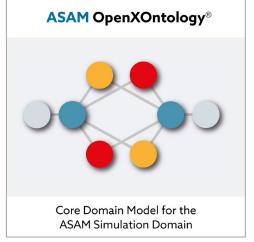










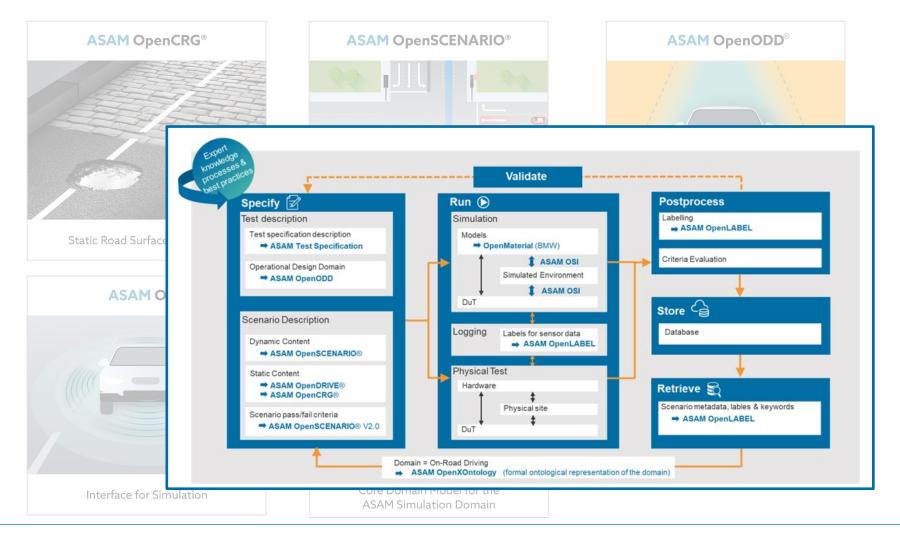


With openX standards a new era of ASAM e.V. standards is ahead

Virtual evaluation as the main goal









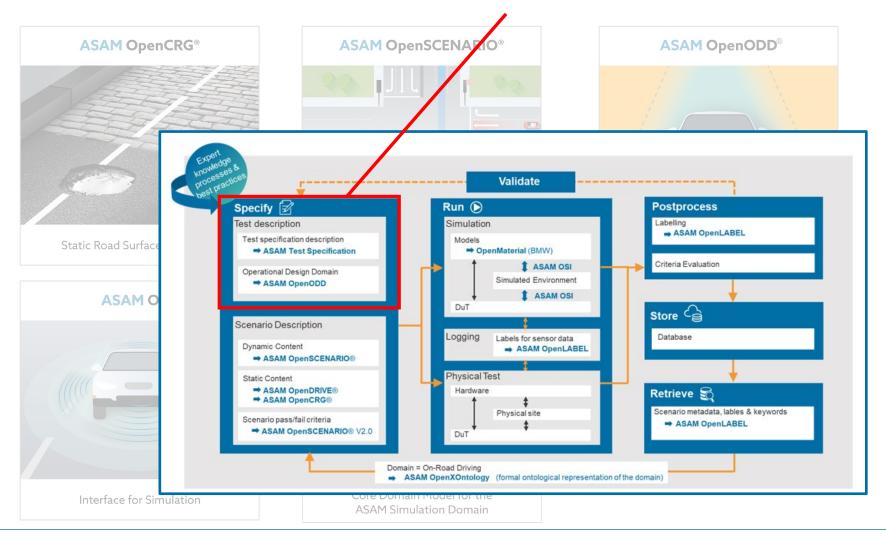
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Virtual evaluation as the main goal

Consolidation is in progress!





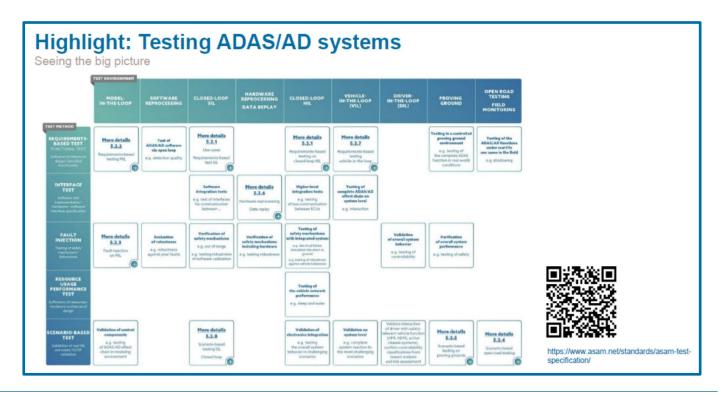




Strategic Position of the organization and the standards

Our way forward

- Working Group of **ASAM Test Specification** as a consolidation effort for user-cases and standards, for example
 - ASAM openLabel/openScenario, and ASAM ODS
 - ASAM MDF and ADAS raw data

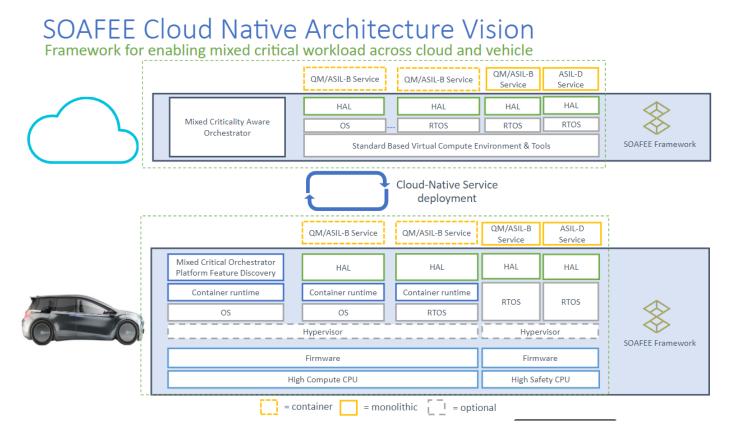




Strategic Position of the organization and the standards

Our way forward

- "Multi-modal mobility with an emphasis on simulation" and "Software Defined Vehicle (SVD) and its data pools"
 - Environment models
 - Data formats for sensors
 - Domains outside automotive
 - Railroad
 - Motorbikes
 - Mobility networks and infrastructure





ASAM in Japan

A success story and blueprint for other activities







2015

ASAM opens office in Japan

ASAM Japan G.K. officially opens its doors in November 2015 with Mr. Yoshiaki Shoi as the representative of ASAM in Japan. With this step, ASAM responds to the continuous growth in new members in Japan. The office in the Tokyo-area aims to promote collaboration among member companies and promote the concept of standardization in Japan.



2020 / 2021

The first standards purely developed in Japan are released within ASAM

ASAM MCD-2 MC

2020: Release of ASAM HMS (Hex File MGMT)

2021: Work package for ASAM OpenDRIVE

purely developed in Japan

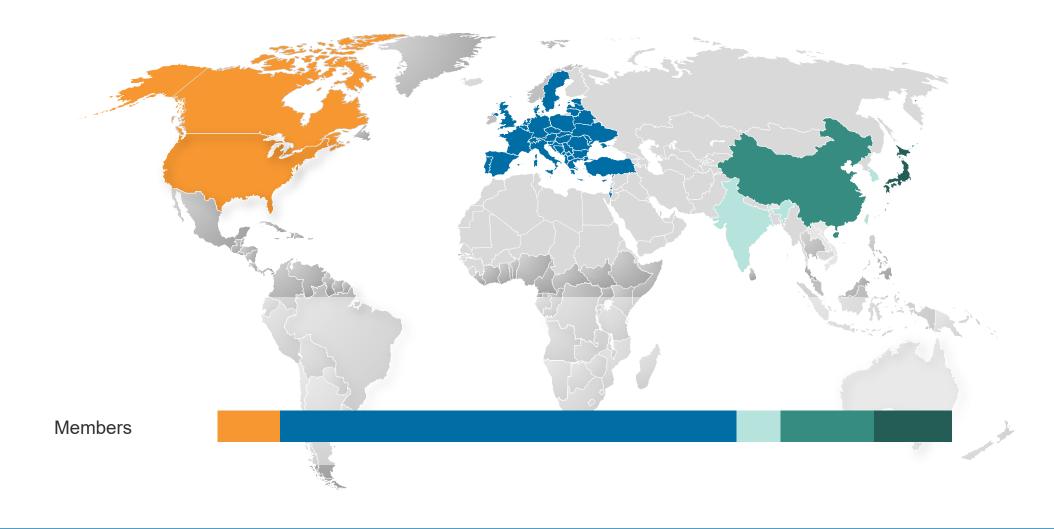
2021: Release of ASAM SCDL





ASAM – a truly international association

Global distribution of members, March 2023





Regional Meeting Japan 2023

Again, we're looking at an event with close to **150 participants** from Japan that are interested in getting updated, using, and/or contributing to **ASAM Standards**.

Let's start the second 25 years of ASAM with a successful regional meeting!





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