# Standardizing with ASAM

ASAM US-Meeting, Novi, MI
October 26, 2016

Agenda (1:30 p.m. – 5:00 p.m.)

- · Welcome and Introduction (Hans-Georg Swolana)

‣ **Session 1: ASAM Related Topics**
- · ASAM – Introduction and Latest News (Klaus Estenfeld)
- · The Value of ASAM Standards – From a Supplier's Perspective (Stephanie Amrite)

‣ **2:40 p.m. – 3:00 p.m. Break**

‣ **Session 2: Technology**
- · The Use of Big Data in Automotive Industry (Mark Quinsland)
- · Ongoing ASAM Standardization Activities in US and Europe (Joseph Sparacino)

‣ **3:50 p.m. – 4:10 p.m. Break**

‣ **Session 3: Strategies for the Future**
- · Cyber Security – a Challenge for the Automotive Industry (Larry Hilkene)
- · The Future of ASAM in the Americas? (incl. Q&A session) (Gorance Eftimovski, BoD)
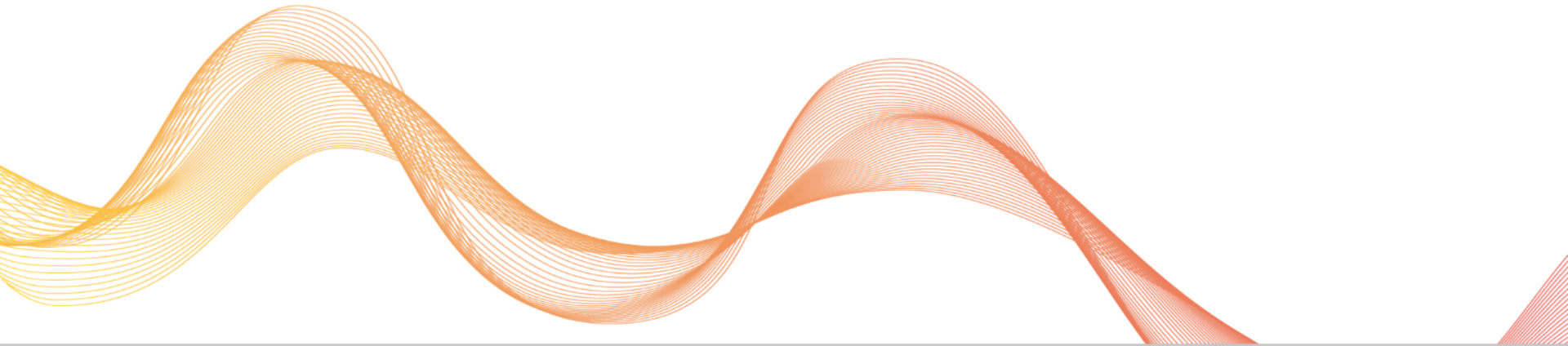
ASAM

Introduction and Latest News

Dr. Klaus Estenfeld

Agenda

1	**About ASAM**
2	Standardization Activities
3	Internationalization

ASAM History

Driven by the Needs of the Automotive Industry

German Arbeitskreis

5 Directors of Development agree to cooperate with their suppliers.

ASAM e.V.

Foundation of a registered association

Vision

ASAM pursues the vision that the components of a development and test tool chain can be freely interconnected and allow a seamless data exchange.

Internationalization

ASAM's community grew internationally with OEMs, Tier-1s, and Tool Vendors joining from
- Europe
- Asia
- North America

Internationalization 2.0

International members triggering new standardization:
- Big Data Applications
- Telematics
- HEX File Management

1991

1998

2011

2016

1980s / 90s

Pressure to cut costs & optimize processes

Introduction of electronics & computers in development process

▶ **Proprietary test solutions with incompatible interfaces & data formats**

Early Organization and Successes
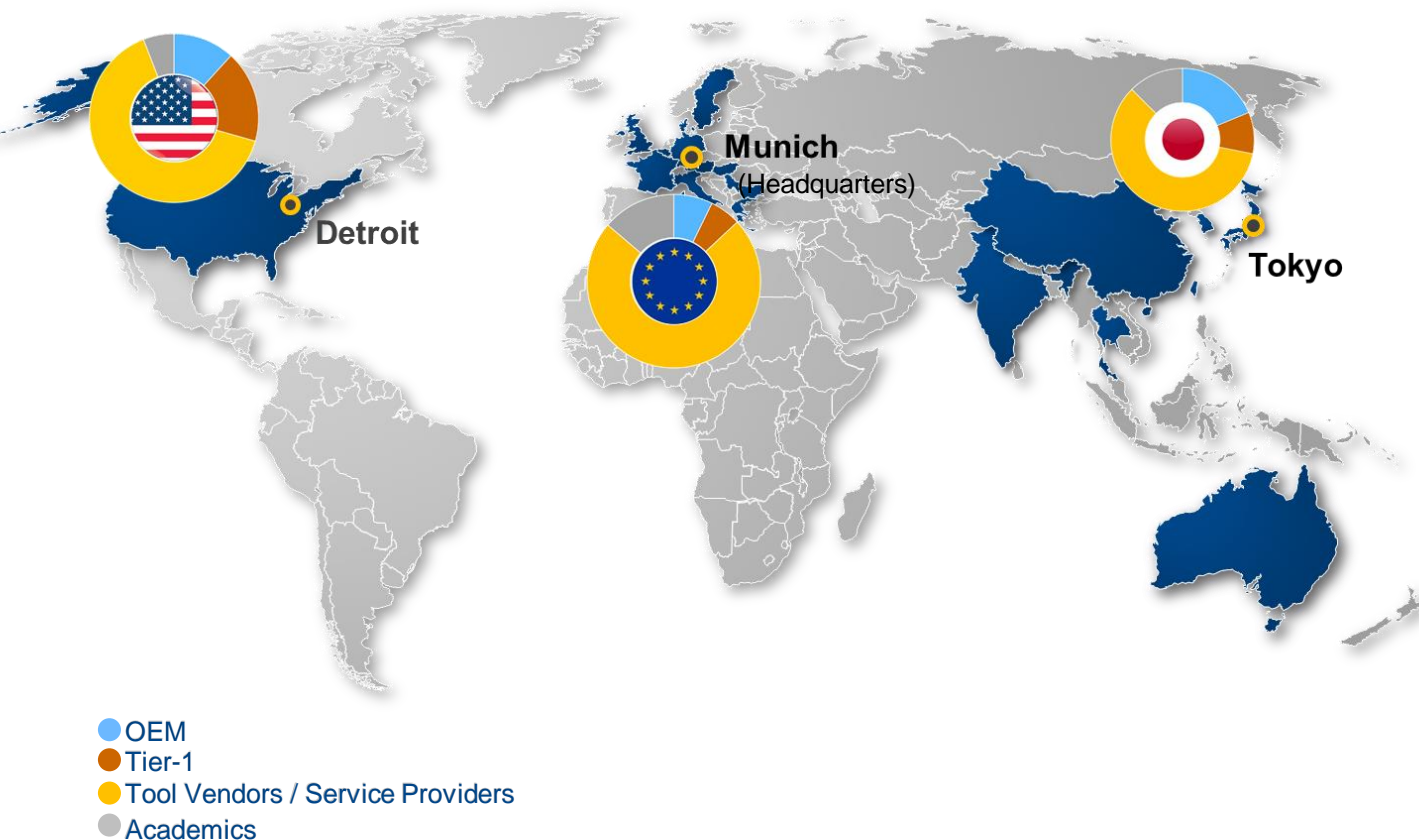
▶ **Automotive Electronics**
- A2L – Structure Definition of Calibration Files
- ASAP2 – Communication between ECU and Calibration Tool
- ASAP3 – Communication between ECU Calibration Tool and Automation System

▶ **Computer Aided Testing**
- ODS – Open Database Standards

ASAM Today
Most of the Big OEMs and Tier-1s Worldwide are ASAM Members

Detroit

Munich
(Headquarters)

Tokyo

- OEM
- Tier-1
- Tool Vendors / Service Providers
- Academics

Continued Excellence

▶ Legal Owner of **25** Standards

▶ **13** Active Working Groups

▶ **3** Proposals

▶ **2** Working groups evaluating Telematics use cases

Success Stories

▶ **Almost all road vehicles** are calibrated with ASAM standards

▶ **All big German OEMs** use ASAM diagnostics

▶ **Most test benches world-wide** use ASAM standards for integrating test automation and test data management tools

ASAM Membership

More Than 180 Member Companies Develop and Apply ASAM Standards.

OEMs

Suppliers

Tool Vendors

Academics

Board of Directors

International OEMs, Tier-1s and Tool Suppliers are Represented

‣ Hans-Georg Swolana (Chairman)
  BMW AG

‣ Marc Blatter
  Daimler AG

‣ Gorance Eftimovski
  Cummins Inc.

‣ Prof. Dr. Marcus Rieker
  HORIBA Europe GmbH

The ASAM Organization
A Next Step to Facilitate International Contribution is Done

‣ Online attendance (since 2016)
‣ Online voting (from 2017 on)

Technical Steering Committee (TSC)

A Highly Experienced International Team of Experts

‣ **AVL LIST GmbH**
Dr. Gerald Sammer

‣ **Audi AG**
Franz Wöhrl

‣ **Continental Automotive GmbH**
Helmut Wellnhofer

‣ **dSPACE GmbH**
Dr. Hans-Joachim Rabe

‣ **emotive GmbH**
Jörg Supke

‣ **ETAS GmbH**
Killian Schnellbacher

‣ **National Instruments Corp.**
Stefan Romainczyk (Speaker)

‣ **Peak Solution GmbH**
Dr. Hans-Jörg Kremer

‣ **Robert Bosch Engineering Ltd.**
Umesh Kini

‣ **Softing GmbH**
Markus Steffelbauer

ASAM Office

Operation and Communication for the Overall ASAM Community …

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LOCATION

Hannover · Berlin
Cologne
Frankfurt
Stuttgart
Munich

Höhenkirchen, near Munich/Germany

ASAM Japan G.K.

… and locally in Japan

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Representative in Japan

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LOCATION

Tokyo

near Shimbashi & Shiodome subway stations, Tokyo/Japan

ASAM Related Content Available Everywhere

The ASAM Website is the Information Center Around All ASAM Activities

Events requiring registration:

- **Proposal workshops**
- Trainings that are open to members
- ASAM International Conference
- Assemblies & Meetings
- Etc.

Standard Download:

- Brief content description (more details in Wiki!)
- Standard Download
- Free downloads (Release presentations)
- Member products that support the standard

„Heart of ASAM":

- Project Proposals (**Call for particiption**)
- Current projects (Overview sheets)
- Recent Releases
- **Public standard reviews**
- **Call for offers**
- Standardization Process
- Technical Steering
- Tools for Standardization

Give members a voice:

- Member profiles
- Member products based on ASAM standards
- Member application stories (Case Studies)
- ASAM „products": Checker tools

News & Marketing:

- News
- Press releases
- ASAM related publications
- Marketing material for your advertisement: („ASAM member"-logos, brochures)
- Newsletter sign-up

Agenda

1	About ASAM
2	**Standardization Activities**
3	Internationalization

ASAM Standards Portfolio

AE and CAT have been the Areas of Activity so far

- ◉ International community of experts
- ◉ Focus on engineering, simulation, development, testing, manufacturing
- ◉ Community-defined standard interfaces and formats for simplifying the data exchange between automotive development and validation tools
- ◉ Non-competitive areas

Technical Areas:

▶ **Measurement & Calibration**
ASAM MCD-1 XCP, ASAM MCD-2 MC, ...

▶ **ECU Networks**
ASAM MCD-2 NET, ...

▶ **Diagnostics**
ASAM MCD-2 D (ODX), ...

▶ **Software Development**
ASAM MDX, ASAM MBFS, …

▶ **Test Automation**
ASAM MCD-3 MC / D, ASAM XIL, …

▶ **Data Management & Analysis**
ASAM ODS, etc.

▶ **Telematics**

Technical Standards:

DM	API – API	API
Data Model	Communication API	SW-component API

DB	File	Prcl – Prcl
Data Base	File Format	Communication Protocol
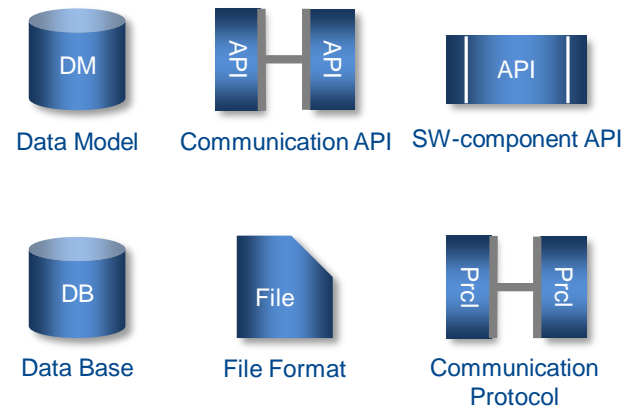
2016 - Release of First "Smart" Standards

Capturing Expert Knowledge for Faster and Secure ECU Calibration

2016

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Release
- ASAM MCD-2 CERP 1.0   **New Standard**
- ASAM CPX 1.0   **New Standard**

Cross Test
- ASAM XIL 2.0.1 MA-Port

Release
- ASAM OTX Extensions 1.1

Cross Test
- ASAM XIL 2.0.1 EES-Port
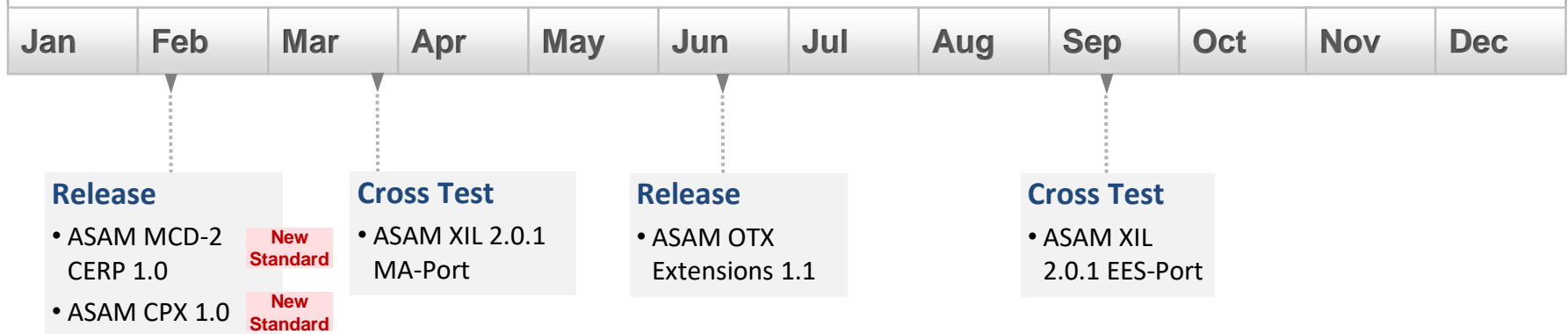
ASAM Concept Projects

- Big-Data Technologies for ODS

ASAM Ideation Projects

- Use Cases in Telematics

Study Projects in Japan

- Investigating applicability of ASAM MCD-1 XCP 1.3 and POD Access
- Interoperability Analysis of ASAM MCD-2 MC Tools
- ASAM ODS Use-Case Analysis and Problem Resolution Determination

2017 – North America and Japan Become Active

First Proposal from Japan for a New International Standard

2017

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec

Release
- ASAM ODS 6.0
- ASAM XIL 2.0.3
- ASAM MCD-1 POD **New Standard**

Release
- ASAM MCD-1 XCP 1.4
- ASAM MCD-2 CERP 1.0.1
- ASAM CPX 1.0.1
- ASAM XIL 2.0.4

Release
- ASAM MDF 4.2

Other ASAM Projects Currently in Proposal Phase
- ASAM MCD-2 NET 4.1.2
- ASAM Issue 3.1.1

ASAM Concept Projects
- Conceptual Study on Real-Time ECU Access API

First Project Proposals from Japan
- "HEX File Management"
- ASAM MCD-2 MC 1.7.1

First Project Proposals in Telematics (tbc.)
- Authentication / Security
- Cloud interface

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3	**Internationalization**

Promoting Internationalization

ASAM has Taken Action and Will Continue to Do So

Executed:

‣ International teams on Board of Directors, TSC and Office

‣ Standardization process opened up to ease participation from all regions and time zones and to reduce travel needs

‣ WebEx conferences as communication tool for international working groups

‣ Training and support for all members world wide

In Process:

‣ Establishment of a „community tool" to encourage an international idea exchange and to further opening up the standards development process

‣ …

US – Targeting New Domains

US Members Have Already Started to Take Part in the Standardization Process

1999:
North American ASAM Interest Group evolves

2010:
First US working group to advance ASAM ODS:
P2010-08: ASAM ODS WebServices

2015:
Concept Project driven by the US, conducted together with Europe:
P2015-08:
Big Data Technologies for ASAM ODS

2016
US-Members push Telematics as new standardization areas
Two ideation groups are currently evaluation standardization potential:
• Security / Authentication
• Cloud Interfaces

1998   2000   2002   2004   2006   2008   2010   2012   2014   2016

1999, 2000:
First US-members:
GM   Ford

2003-2009:
GM part of the Board of Directors

2005:
ASAM office in Michigan

2015:
Cummins Inc. part of the Board of Directors

Japan – First Standardization Activities Started

Japanese Engagement in ASAM Increased Significantly in the Past Years

First Japanese companies become ASAM member

Awareness of ASAM standards, but no common alignment in Japan

Japan ASAM Interest Group (JAIG)

OEMs see need for usage of standards.

HONDA NISSAN TOYOTA HINO SUBARU

=> Start and lead common JAIG initiative (47 companies take part)

Foundation of ASAM Japan G.K.

Support of local activities

Japanese members propose first standardization activities to ASAM:

- ASAM MCD-2 MC
- HEX File Management

Timeline: 2001 — 2002 — …. — …. — 2012 — 2013 — 2014 — 2015 — 2016 — 2017

JAIG transitions to an official ASAM community

- intensify study activities
- provide first feedback to European working groups
- establish a Japanese **OEM Steering Committee**

Japanese Motorcycle OEMs show interest in ASAM standards for calibration

HONDA Kawasaki Powering your potential SUZUKI YAMAHA

Thank you for your attention!

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