ASAM SCDL V1.6.0
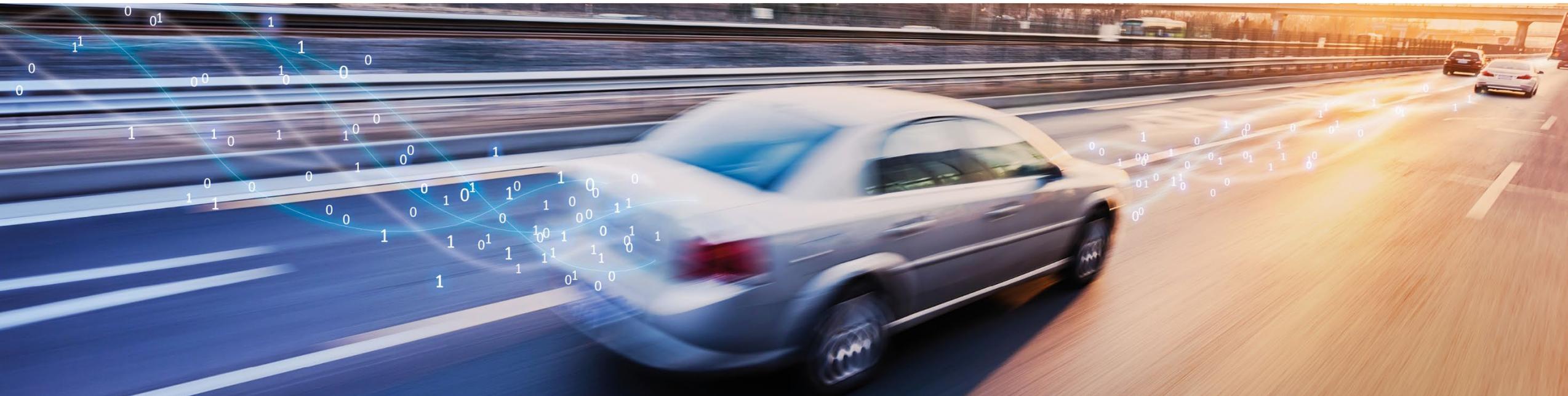## Technical Seminar
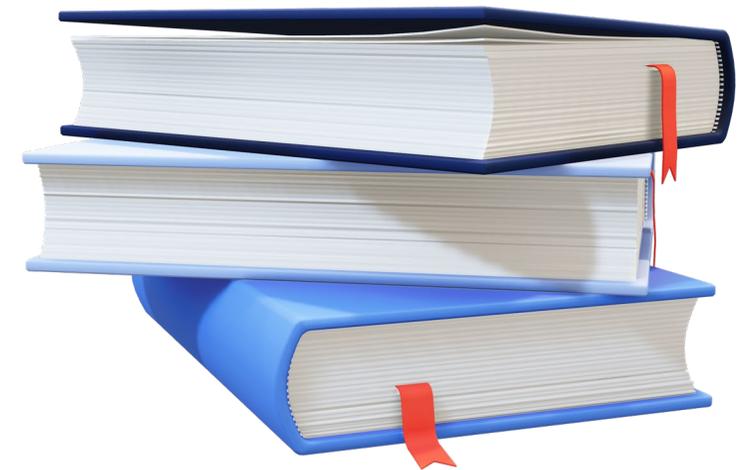
Representative of ASAM Japan
Yoshiaki SHOI

October 8th, 2021
Microsoft Teams meeting

ASAM Association for Standardization of Automation and Measuring Systems
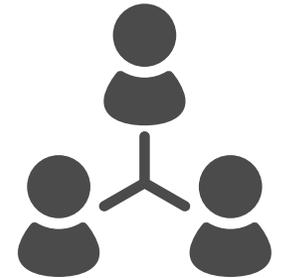
Introduction

- ASAM SCDL (Safety Concept Description Language) is a new standard in ASAM.

- The below contents are explained.
  - **History**: The first contact and current status
  - **Implementation**: Answer to how the standard is delivered?
  - **Future**: Answer to what kind of standard activities are expected around the standard.
  - **Conclusion**: Summary of the standard.

History of SCDL standard

Beginning and workshops

September 2017:
The first meeting was held by ASAM and SCN-SG (an Organization for SCDL development).
February 2018:
Steering committee of SCN-SG and ASAM held a meeting. ASAM SCDL standard was discussed.
April 2018:
ASAM Boards and the steering committee held a meeting in Japan. A special workshop for European was planned as a result.
September 2018:
The workshop was held in Munich, and eleven participants were joined. Every participant agreed with architecture of SCDL and metrology. The workshop in Japan was also scheduled.
January 2019:
The workshop in Japan was held, and sixteen parsons participated.
Four OEMs were included in the participants. They have got satisfaction for the workshop and completely positive feedbacks were earned in survey after the workshops.

History of SCDL standard

ASAM Standard Project

August 2019:

 ASAM and SCN-SG determined that SCDL standard project start with ASAM.

January 2020:

 International proposal workshop was held. Seventeen persons participated in the meeting. Described contents of the project proposal have been concluded by the participants.

January 2020:

 Japanese SCDL specification version 1.5 has been released by SCN-SG.

May 2020:

 TSC meeting was held, and the proposal was approved.

June 2020:

 The kick-off meeting of ASAM SCDL project was held. Development of the standard started.

September 2021:

 Descriptions of the specification documents were completed. Public review was started.

November 2021 (Scheduled):

 TSC meeting is scheduled for the approval.

Contents and deliverables for the standard

Specification documents:

- Notation Specification
  Strict rule of the symbols in SCDL are defined. It is useful to understand described safety architecture figured by SCDL.
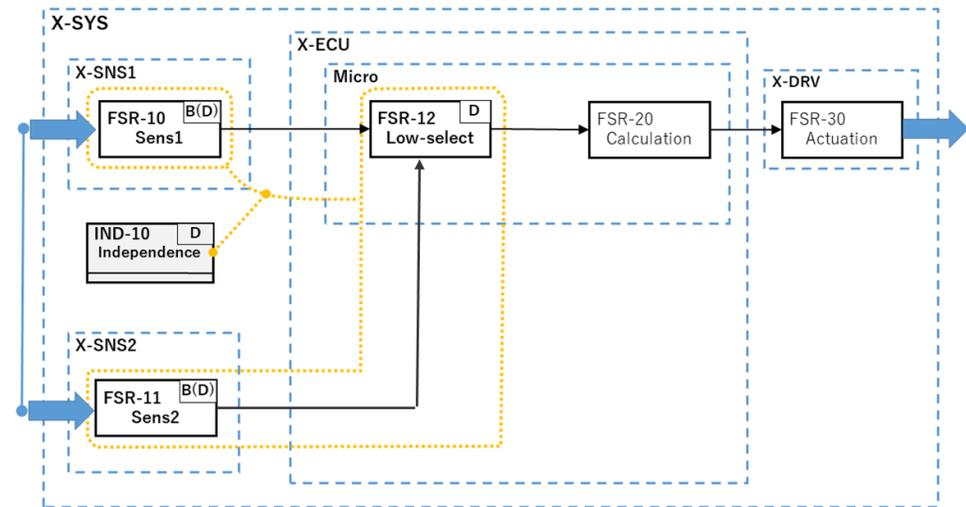
- Practical examples
  The document show figured safety architecture with simple system. It is useful to understand how to figure the architecture by SCDL.
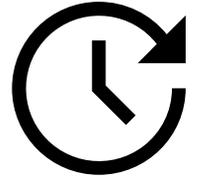
- Data Exchange Format
  Machine-readable format for SCDL is defined.
  It is implemented by XML technology.
  XML schema file is also attached.

Future

Estimated activities:

- Annotation for the schema file: It is useful for tool vendor.
- Use case expansion and its implementation: The new use cases are discussed in SCN-SG and end-user of SCDL. It would be implemented by ASAM standard project.
- Security: It is supposed that SCDL could figure security architecture with expansions of the rule. Concept project of the security would start at that time.

Of cause, all ASAM member can start and implement the new future.

Summary

- ASAM SCDL standard is in the new standard.
- Notation and its data exchange format is standardized.
- The standard directly relates to process of functional safety, such as ISO26262.
- Expansions of the standard are planned, such as security domain.

Thank you!

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