ASAM ODS V6.1.1
Release Presentation

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ASAM Association for Standardization of Automation and Measuring Systems

Agenda

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3	New Features
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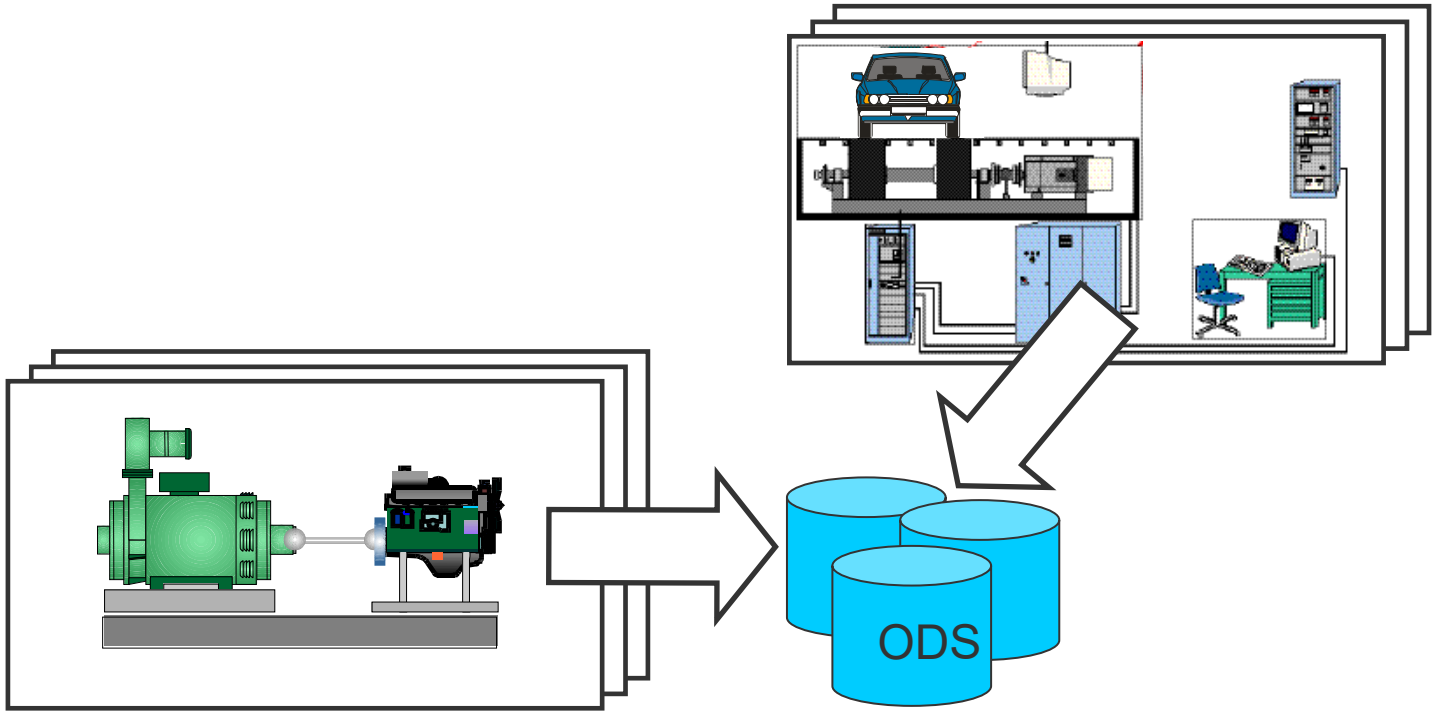
Introduction

This release of the ODS Standard is a minor Version of the Base Standard. Several Correction requests have been fixed and a new Associate Standard has been Added. It is the “Instrumentation” Application Model for the description of sensors and sensor geometries.

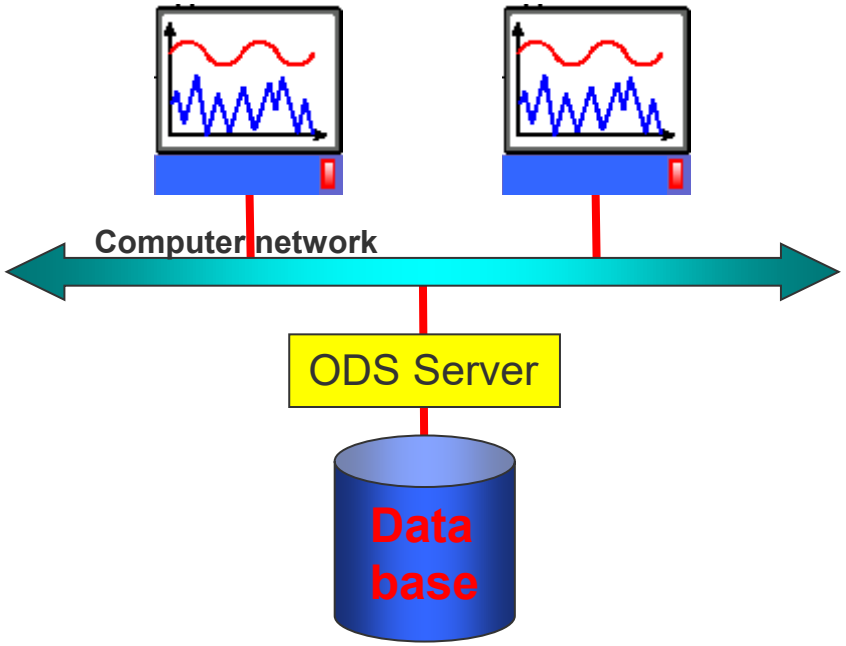
Here is a short description, what the ODS Standard is.

- ASAM ODS is a standard for archiving test data persistently.



Introduction

- ASAM ODS defines Application Programming Interfaces for a server. The server is a front end to a traditional database.
- The server is accessible via a TCP/IP computer network.

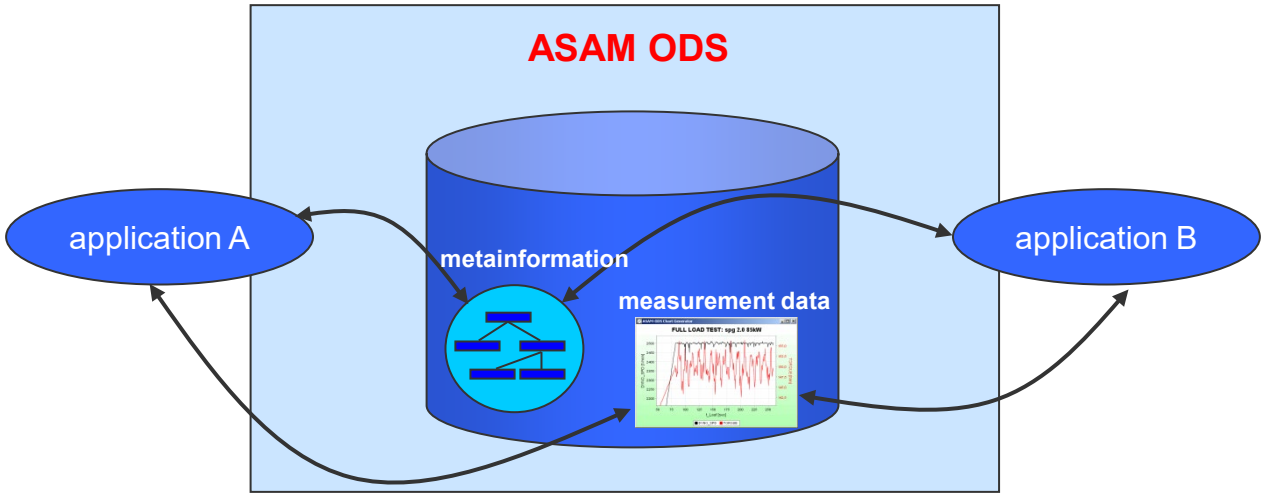


Introduction

ASAM ODS defines

•a Basic Data Model which can be mapped to customer specific applications
(engine test, brake test, engine calibration, … etc.)

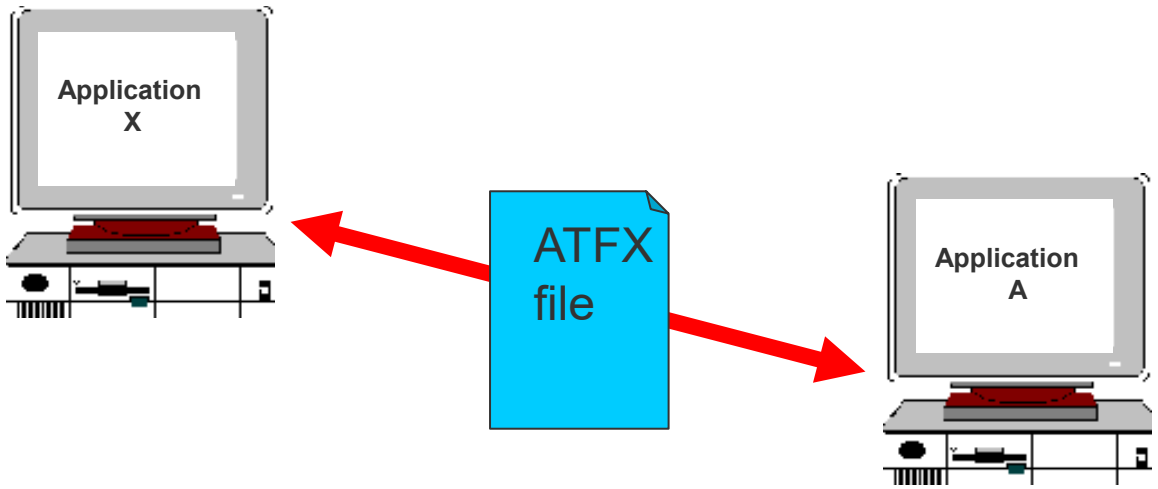
•a Meta Data Model enabling a client application to navigate through domain specific or application specific data structures



Introduction

ASAM ODS defines

- a file format for the exchange of test result data



Introduction

ASAM ODS

- defines data models for dedicated applications like
  - NVH data
  - Test stand calibration data
  - VSIM (crash test data model, provided by ISO)
  - Workflows
  - Geometry data
  - Bus data
  - Big Data
  - Instrumentation (new)
- supports gateways to foreign data formats
- defines export of ODS Data into Avro, JSON and Parquet

Motivation

1. While using the ASAM ODS Standard some Change Requests came in, so we needed a maintenance release to fix the issues.
2. The ODS checker had also a bunch of issues and had to be fixed for the actual release of the standard.
3. BMW made a project proposal for a new Associate Standard to specify sensor geometry and life cycles.

New Features

Associate Standard “Instrumentation”

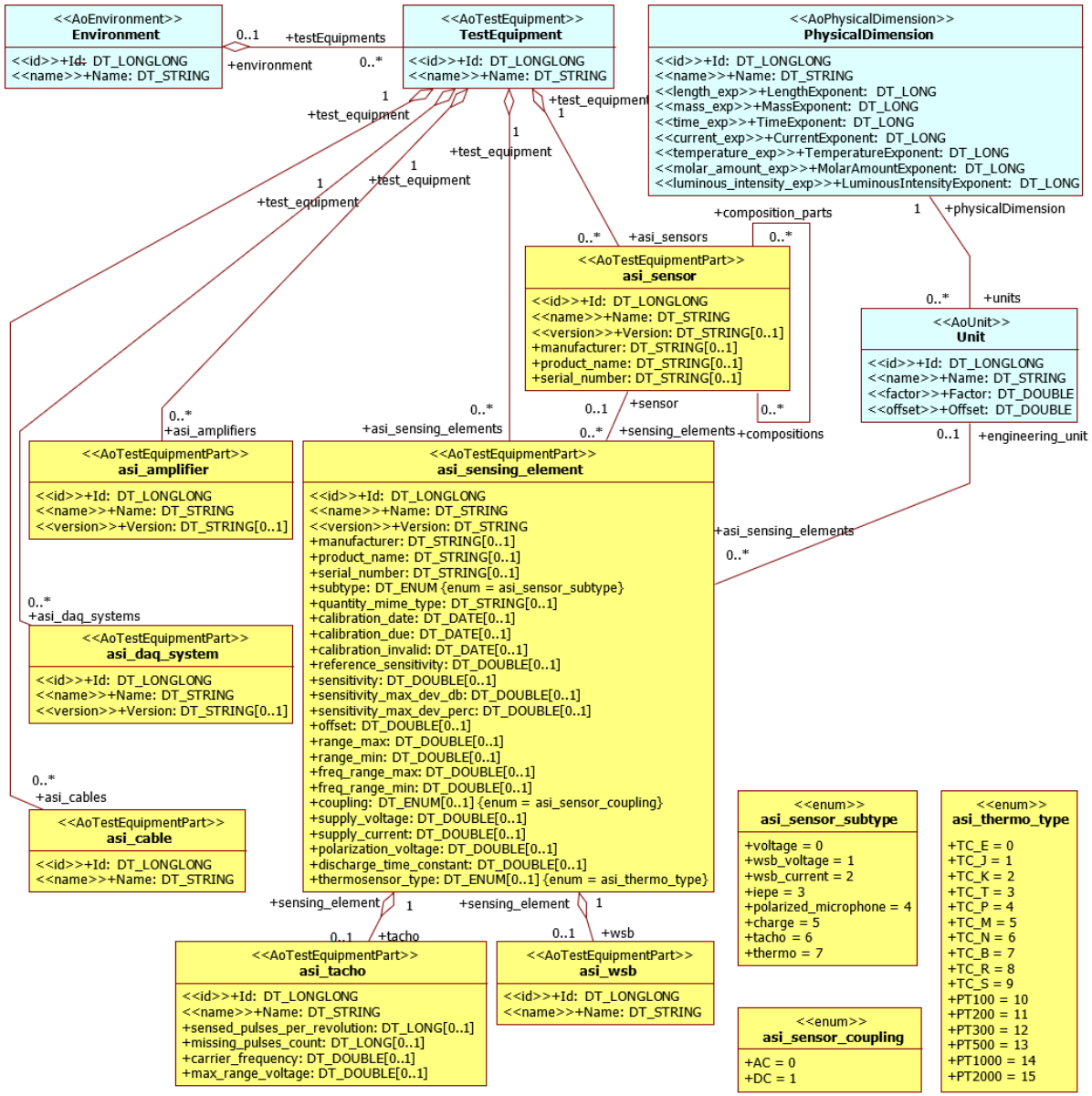
- Contains the complete specification of the associate standard describing the instrumentation components used for data acquisition and their configurations for particular measurements.
- Specifies a set of application elements used for documenting the instrumentation, together with their attributes and relations.
- Provides a set of rules which must be obeyed when creating instances of these application elements.
- Is intended for implementers and users of ASAM ODS dealing with data acquisition.

New Features

Associate Standard “Instrumentation”

This standard is a first step

and will be continued.



Application mode
the instrumentatic
database

ASAM

New Features

Associate Standard “Instrumentation”

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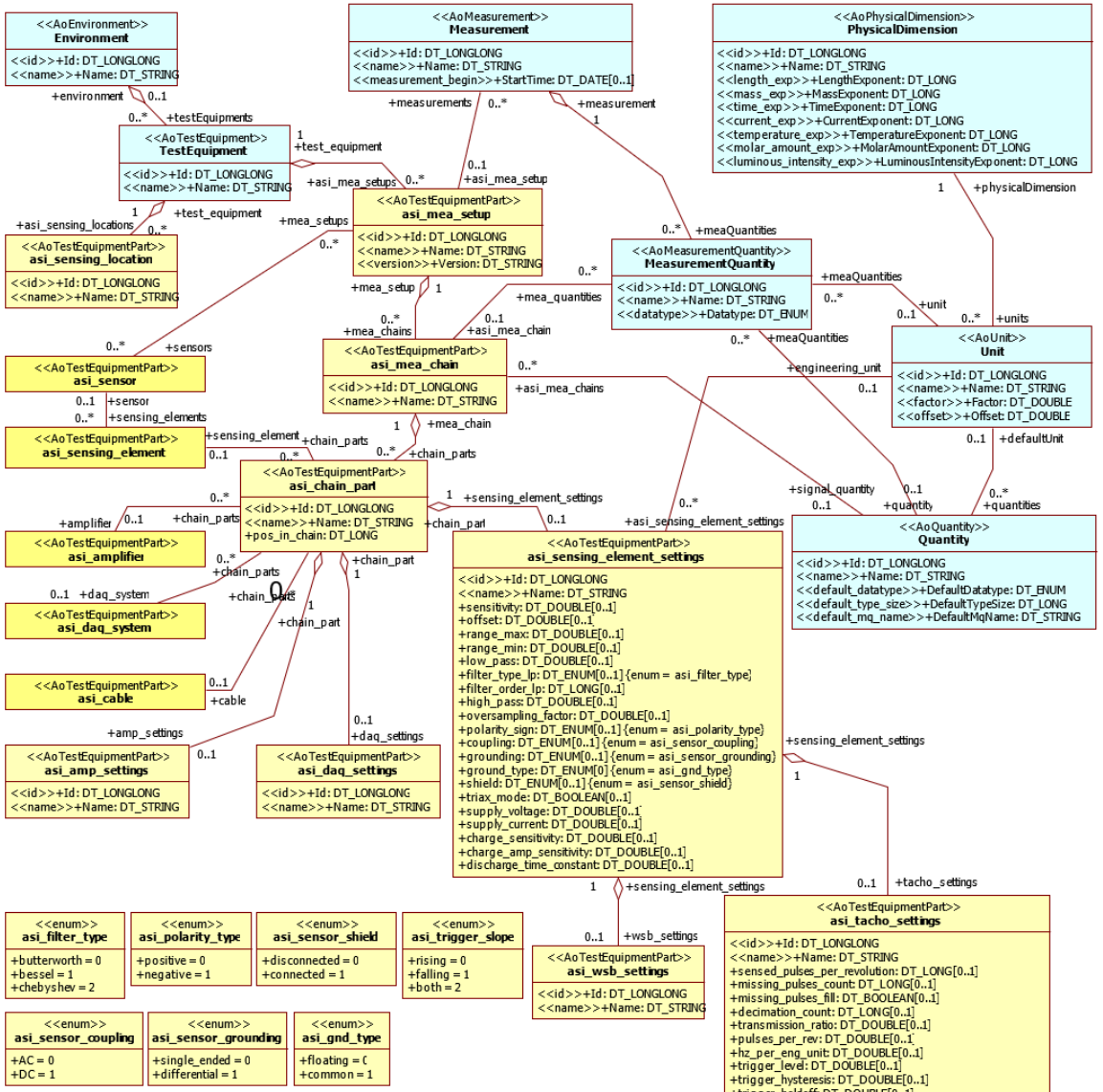

Application model for the instrumentation settings

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Other Changes

Processed Change Requests

Number of processed CRs: 40

Base Model	2
ATFX	1
HTTP-API	7
Big Data Connector	3
Checker	20
Rejected	5
Withdrawn	2

Backward Compatibility

ASAM ODS 6.1.1 is fully compatible with the previous ODS 6.1.0 standard

Relation to Other Standards

ASAM MDF

- ASAM MDF4 Files can be used as External Reference to be managed by an ODS Mixed Mode Server or by an ATFX File.

Deliverables

Overview

- Specification incl. API description
- Appendix including related documents
- IDL description of API interface
- Definition of the structures for the GOOGLE Protocol Buffers
- Basic data model as step express file
- XML schema files
- Example ATF/ATFX files
- Example Query Code for CORBA Extended Query
- Example Code for HTTP
- Example Export Definition File
- Example Code for BigData Mass Data Export
- Release Presentation

Deliverables

Base Standard Documentation

- ASAM_ODS_BS-01-15_Introduction_V6-1-1.pdf
- ASAM_ODS_BS-02-15_RelToOthers_V6-1-1.pdf
- ASAM_ODS_BS-03-15_Architecture_V6-1-1.pdf
- ASAM_ODS_BS-04-15_Base_Model_V6-1-1.pdf
- ASAM_ODS_BS-05-15_OO_API_V6-1-1.pdf
- ASAM_ODS_BS-06-15_RPC_API_V6-1-1.pdf
- ASAM_ODS_BS-07-15_ATF_XML_V6-1-1.pdf
- ASAM_ODS_BS-08-15_ATF_CLA_V6-1-1.pdf
- ASAM_ODS_BS-09-15_Physical_Storage_V6-1-1.pdf
- ASAM_ODS_BS-10-15_Mime_Types_V6-1-1.pdf
- ASAM_ODS_BS-11-15_HTTP-API_V6-1-1.pdf
- ASAM_ODS_BS-12-15_TermsDefinitions_V6-1-1.pdf
- ASAM_ODS_BS-13-15_SymbolsAbbrev_V6-1-1.pdf
- ASAM_ODS_BS-14-15_Bibliography_V6-1-1.pdf
- ASAM_ODS_BS-15-15_Appendices_V6-1-1.pdf

Deliverables

Base Standard Model and Interface Definitions

- Model
  - asam35.exp (Step-Express)
  - ODSBaseModel_asam35.xml
- CORBA OO API Interface Definition
  - ods531.idl
- RPC Interface Definition
  - aods.x
- Google Protocol Buffer Definitions
  - ods.proto
  - ods_notification.proto
  - ods_security.proto
  - ODSBaseModel_asam35.protobuf.json
- XML Schema Files
  - ASAM_HDTypes.xsd
  - HelperSchema.xsd
  - ODSBaseModelSpecSchema.xsd
  - Schema.xsd

Deliverables

Associated Standards Documentation

- Noise Vibration Harshness
  - •ASAM_ODS_AS_NVH-Model_V1-5-3.pdf
- Calibration
  - •ASAM_ODS_AS_Calibration_V1-1-2.pdf
- Geometry
  - •ASAM_ODS_AS_Geometry_V1-0-2.pdf
- Workflow
  - •ASAM_ODS_AS_Workflow_V1-0-1.pdf
- Bus Data
  - •ASAM_ODS_AS_BusData_V1-0-2.pdf
- Big Data
  - •ASAM_ODS_AS_BigData_V1-1-0.pdf
- **Instrumentation**
  - **•ASAM_ODS_AS_Instrumentation_V1-0-0.pdf**

Deliverables

Example Files

Example ATF Classic File

- Example_ATF_CLA.atf

Example ATFX Files

- Example_AllTypes.atfx
- Example_Geometry.atfx
- Example_Bus.atfx
- Example_BusWithIndex.atfx
- Example_Simple.atfx
- Example_Workflow.atfx
- Example_CastTypespecs.atfx
- Example_CommonTypespecs.atfx Example_CommonTypespecs.dat
- Example_NonNumbers.atfx
- Example_Instrumentation.atfx
- Example_DescriptiveData.atfx

Deliverables

Example Files

Example Code Extended Query CORBA OO API

- ExampleQueryCode.zip

Example Code HTTP API

- ExampleCode_HTTP.zip

Example Export Definition File

- Example_ExportDefinition_Simple.xml

Example Code BigData MassDataExport

- ExampleCode_BigData_MassDataExport.zip

Outlook

The support of the ASAM MDF4 files shall be improved in the near future. In the next Version an interface to include external files shall be developed. This interface could be used to cover other not only MDF4 files.