What's New in ODS 5.2.0 Release 2009, P18-2008
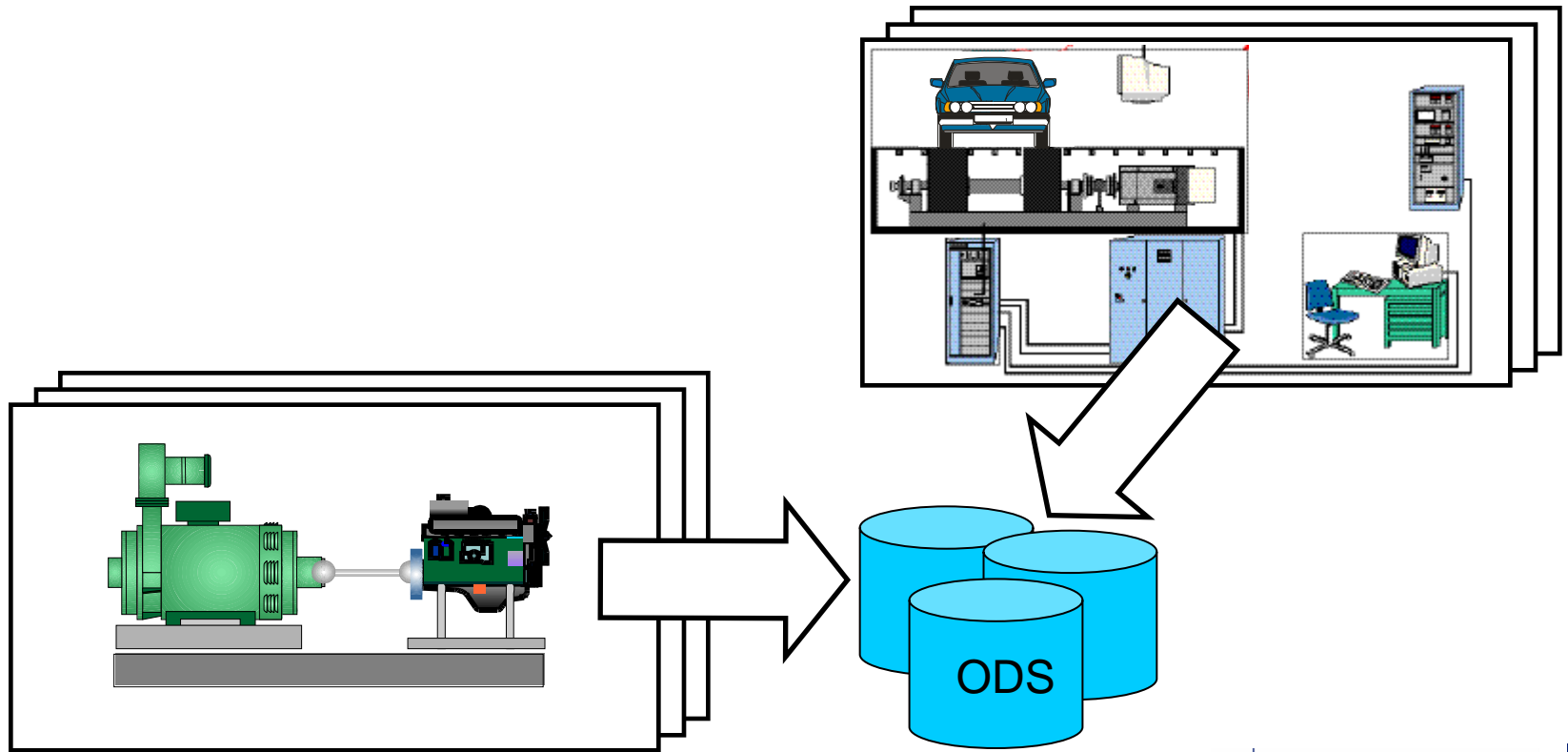
ASAM-TSC, Nov. 17, 2009, Paderborn

Dr. Bruno Thelen, HORIBA Europe
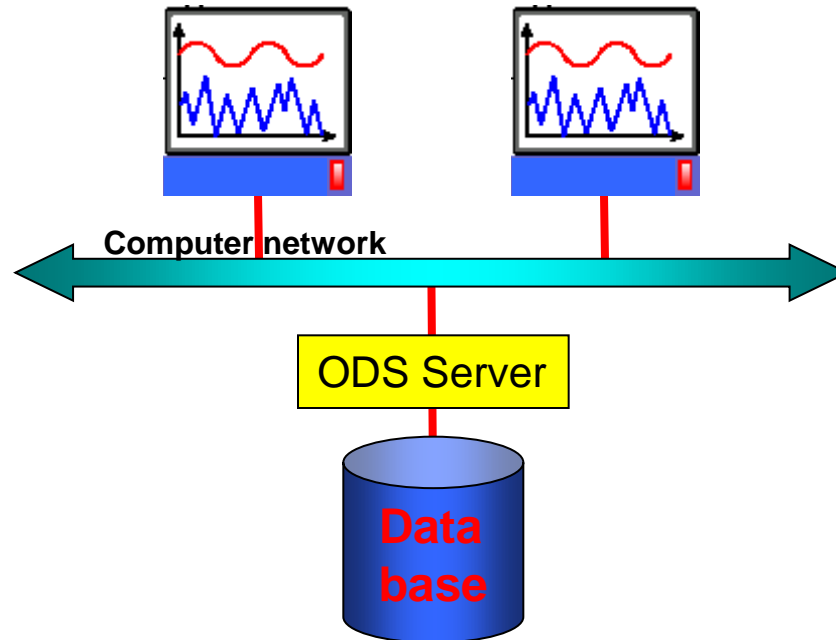
ASAM

ASAM ODS 5.2.0

ASAM ODS is intended to define a standard for archiving test result data persistently.
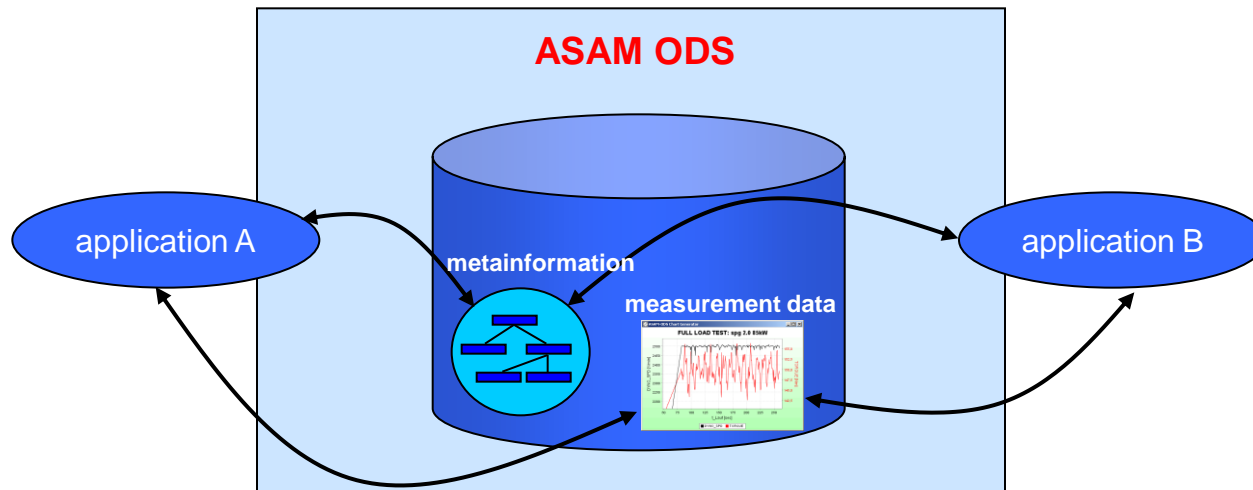
ASAM ODS 5.2.0

ASAM ODS defines

➢ an Application Programming Interface for a server. The server is a front end to a traditional data base.

➢ The server is accessible via a TCP/IP computer network.

Computer network

ODS Server

Data base

ASAM ODS 5.2.0

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 customer specific, resp. application specific data structures

ASAM ODS

application A

metainformation

measurement data

application B

ASAM

ASAM ODS 5.2.0

ASAM ODS defines

➢ a file format for the exchange of test result data
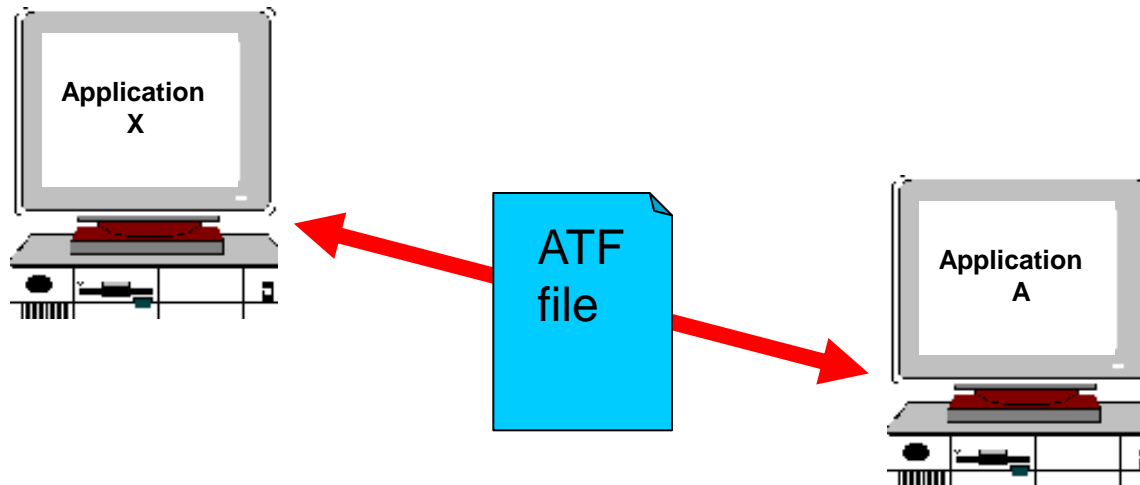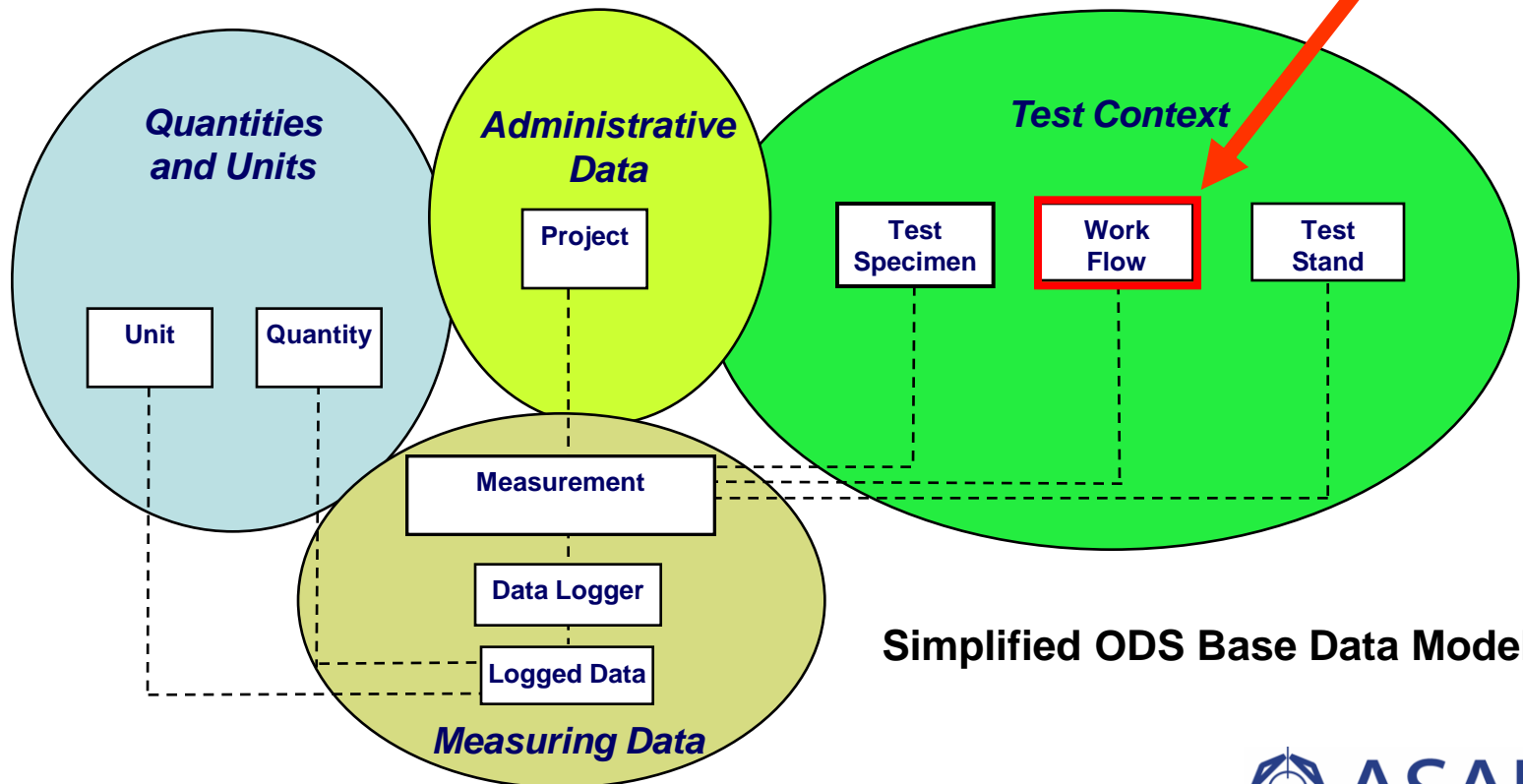
ASAM ODS 5.2.0

ASAM ODS 5.2.0

➢ defines data models for dedicated applications like

    ↪ NVH data

    ↪ Test stand calibration data

    ↪ Workflows (new)

    ↪ Geometry data (new)

➢ supports gateways to foreign data formats

    ↪ **Compatibility** with MDF 4.0

    ↪ compatibility was achieved by a close cooperation between the ODS and MDF working groups during the period 2008-2009

➢ is compatible to previous release 5.1.0

ASAM ODS 5.2.0

The Work Flow Application Model

and its relation to the base data model

Quantities and Units

Administrative Data

Test Context

Project

Test Specimen

Work Flow

Test Stand

Unit

Quantity

Measurement

Data Logger

Logged Data

Measuring Data

Simplified ODS Base Data Model

ASAM ODS 5.2.0

**The Work Flow Application Model**

➢ based on the Petri Net technology

➢ allows to trace each step in a workflow run, e.g.

    ↳ Test preparation

    ↳ Test execution

    ↳ Test result evaluation

➢ Applicable to trace test executions like

    ↳ Engine emission test

    ↳ Administration vehicle endurance test

    ↳ General test run and data analysis
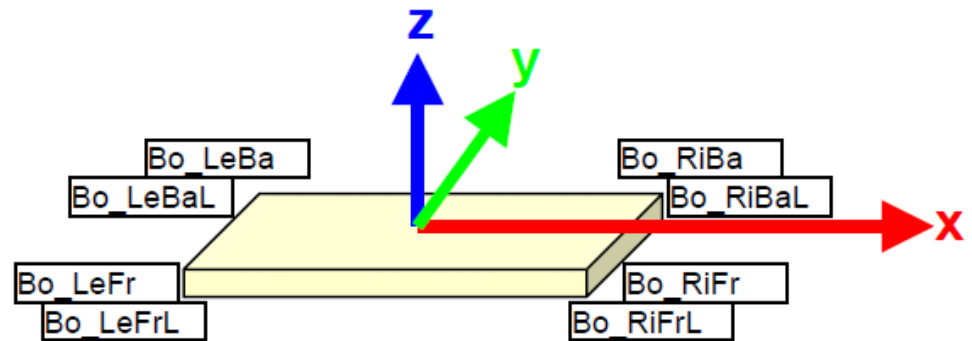
    ↳ ….and many others

ASAM

ASAM ODS 5.2.0

The Geometry Application Model

➢ Typical application field is NVH test domain

➢ Allows to specify sensor locations (e.g. microphone, acceleration, temperature sensor, …)

➢ Documenting

↳ test object structure

↳ link from sensors to measurement quantities
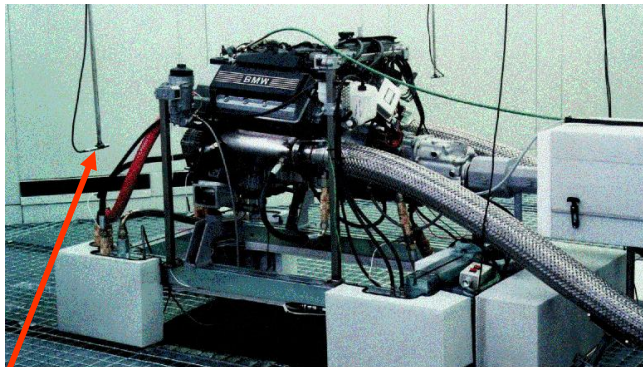
Microphone as sensor

ASAM ODS 5.2.0

Numerous improvements of specification, e.g.

    chap 1 Introduction: summary of ODS-defined application models

    chap 2 Architecture: relation to MDF4 specification

    chap 3 Physical Storage: new supported data types

    chap 4 Base Model: alias names for multilanguage environment

    chap 5 ATF/CLA: improved security concept description

    chap 6 ATF/XML: dto. & case sensitivity for names

    chap 8 MIME types: additions for NVH, geometry, workflow

    chap 9 PRC-API: improved security concept description

    chap 10 OO-API: 11 new methods

    chap 11 NVH Model: rainflow storage revised, performance issue

    chap 12 Calibration model: name change due to DB restriction

    chap 13 Geometry model: new

    chap 14 Work flow model: new

ASAM ODS 5.2.0

Version History

ASAM ODS 4.0   June 29, 2000

ASAM ODS 4.1   July   10, 2001

ASAM ODS 5.0   Sep. 30, 2004 (ISO-PAS 22720)

ASAM ODS 5.1   Mar. 08, 2006

ASAM ODS 5.2   Nov. 17, 2009 released

ASAM

ASAM ODS 5.2.0

Deliverables P18-2008

➢ Specification incl. API description (in total 1512 pages)

➢ IDL description of API interface (~10.000 lines)

➢ Basic data model as step express file

➢ XML schema files

➢ Example ATF files

➢ "What's New" presentation

ASAM

ASAM ODS 5.2.0

Work Group Members

1	FH Cologne
2	Audi AG
3	AVL
4	HighQSoft
5	HORIBA Europe
6	LMS
7	Müller-BBM
8	National Instruments

	Robert Bosch GmbH
	MFP GmbH
	Peak Solutions

ASAM ODS 5.2.0

Project Timing

Start: July 2006   Finish: Oct. 2009

Meetings

~13 in-person meetings, mostly 2-days meetings

Change Requests

~ 250