

ODX-BEST2-Converter supporting migration to ASAM MCD-2D (ODX) at BMW by converting ODX data into BEST2

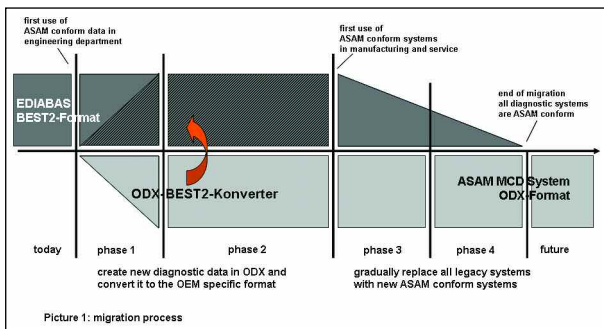
“Our customers rely on standards like ASAM to develop future electronic – and software systems. ESG bridges the gap between current and future needs.”

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i Summary

A well thought through, long term strategy is needed to successfully restructure proprietary diagnostic data formats into the standardized ASAM MCD-2D (ODX) format.

One possible migration scenario lets the suppliers, for a transitional period, create diagnostic data using the ODX format as base, followed by a conversion into OEM specific formats. This migration strategy leaves the OEM time to gradually migrate their legacy systems into ASAM conform systems.



Picture 1: migration process

ii Situation

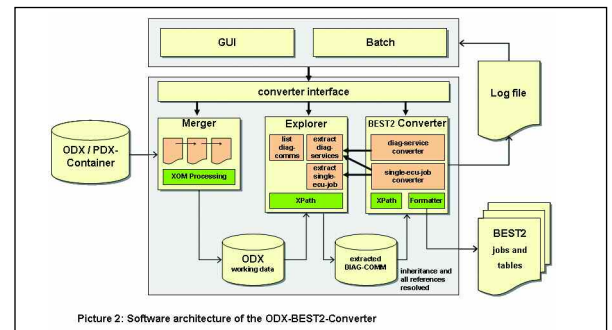
The migration to ASAM MCD-2D (ODX) must be carefully planned, taking into consideration all affected stakeholders (engineering and suppliers, manufacturing and service) during such a process. In particular:

- The process for diagnostic data acquisition needs to be adapted or redefined. This includes: Software & Data validation and Software & Data exchange.
- Systems, software tools and databases must be adapted or redeveloped.
- All personnel involved in the data acquisition process need to obtain ASAM MCD-2D (ODX) expertise; hence a wide training scheme is necessary.

iii Challenges

On behalf of the client BMW, ESG has developed an ODX-BEST2-Converter to transform diagnostic ODX data into BEST2 programming language.

This converter uses a modular approach with a scalable IT architecture to handle future requirements. Both ODX diagnostic services and “Java jobs” can be transformed into corresponding BEST2 code.



Picture 2: Software architecture of the ODX-BEST2-Converter

iv Success strategy

The migration strategy is based on the fact that BEST2 is a functional subset of ASAM MCD-2D (ODX). Hence, BEST2 can be fully represented using ASAM MCD-2D (ODX).

The objective of the ODX-BEST2-Converter is to ensure that ODX data can be integrated in the existing process at BMW without changing the affected systems all at the same time. By using this approach the engineering department can immediately start creating diagnostic data in ODX, independent from the migration status of the other process stakeholders, leaving manufacturing and service to migrate their systems to ASAM conformity at their pace.

v Business benefits

ASAM MCD-2D (ODX) will provide a strong backbone for car diagnostics, based on a well-defined data model and an integrated process chain. The adoption leads to many benefits towards compatibility between OEMs and suppliers with increased quality.

Due to the complex and cost intense migration process, a staged approach using the ODX-BEST2-Converter is one solution which minimizes risks and provides fallback solutions.