

case study

▶ PEAK Solution with AUDI:

Gain of flexibility in data exchange based on **ASAM ODS**

„We chose ASAM because it's a standard and therefore stable and has public documentation.“

(Roland Materna, CAE-/CAT-data management, Audi AG)

SUMMARY

Challenge: Since the creation of test data is an important issue involving considerable cost, it is highly worthwhile to reuse them. The management of this test data is important for our customers among Germany's leading automobile manufacturers. The capability to adopt older measurement data is a necessary issue for the benefit of environments like the MDM framework that is promoted by Audi and realized in our project work. Another issue connected to this subject is the committal of measurement data from an external point and its handling.

Solution: Almost all implementations concerning measurement data management are realized with the MDM toolkit. Interfaces to external systems are provided to maintain a continuous benefit from older measurement data not created in the MDM environment. With appropriate user interfaces the engineer gets access to the data. In the case of export and import of metrics and measurement data the conformity of the data model has to be verified. This is possible for example with ATF files as interchange format.

Key Benefits: The mentioned project items are related to data exchange. The different implementations are a mirror image of the many ways that are possible to take with ASAM ODS and the MDM-Framework with the advantage of being independent from commercial software solutions.

SITUATION

Inter alia, we operate for Audi in the area of data management. Here we are highly connected to the MDM framework that provides the functionality to manage test data.

For the technical development, some further tools and applications were necessary to earn widespread benefit from the functionalities and services provided by MDM. These include user interfaces for the easy handling of the test data by the engineering departments, connectors for external interfaces to adapt older test data and several import/export tools.

CHALLENGES

The conformity of the data model is the main aspect in the mentioned projects to improve data quality and standardization. In the case of tool creation for the MDM framework, it is important to ensure the generic claim. This approach continues right to the user interfaces. Another challenge is the binding of applications to the framework provided by the community, and thus to their agility. Also, in fast moving processes the software quality has to be guaranteed. The take over of earlier test data structures must also be realized.

SUCCESS STRATEGY

All applications concerning the MDM framework were designed and developed preserving the value of the generic data structures. The framework provides the functionality to manage test data. To earn further benefit by the usage of old data, we built adapters for external systems in several projects, as well as developing tools for the creation of new test data and their storage in the underlying data model.

These new components and tools provide the capability to benefit from the generic data model as the leading constant. Another aspect,

the supply of test data to and from any external suppliers was examined and performed in other projects. Underlying test and measurement data is saved in the text based exchange format from ASAM ODS.

CHALLENGES DURING THE PROJECT

While carrying out the projects, we had some hurdles to overcome. In fact, changes in the data model were a challenge for the development. We also had to take care that the balance between flexibility, complexity, compliance and quality is kept. For old test data that has to be used further on, it was necessary to define a mapping in the ASAM ODS base model. For export and subsequent import of test data roundtrip properties are guaranteed as a kind of validation of the data model.

BUSINESS BENEFITS

The MDM framework provides a basis for further projects and can be realized in a few simple steps. Its components can be introduced to various areas, and the approach adapted to other objectives. The agility of the Open Source community is easily integrated into our process model. With the developed components and tools around the framework the customer is independent of commercial software solutions. Furthermore, the framework represents a cross-company solution which saves cost of transforming data and application development. It affords an inter-divisional data exchange and helps to spread knowledge.

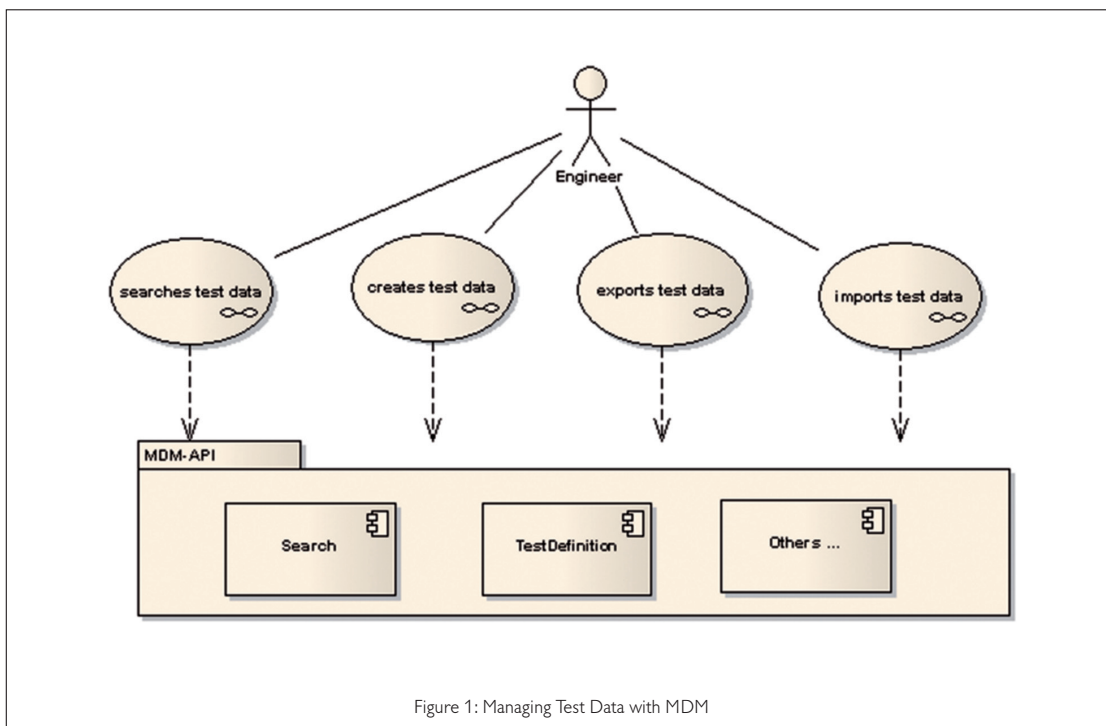


Figure 1: Managing Test Data with MDM