Release Presentation

ASAM AE MCD-3MC V3.0.0

TSC Wolfsburg, 2011-10-19

Deliverables

Generic Model

- ASAM_AE_MCD-3_MC_AnalysisModel_V3-0-0.mdl

- ASAM_AE_MCD-3_MC_HTML-Export_V3-0-0.zip

Documents

- ASAM_AE_MCD-3MC_BS_1_2_ProgrammersGuide_V3-0-0.pdf

Technology Reference (incl. mapping rules, interface source code)
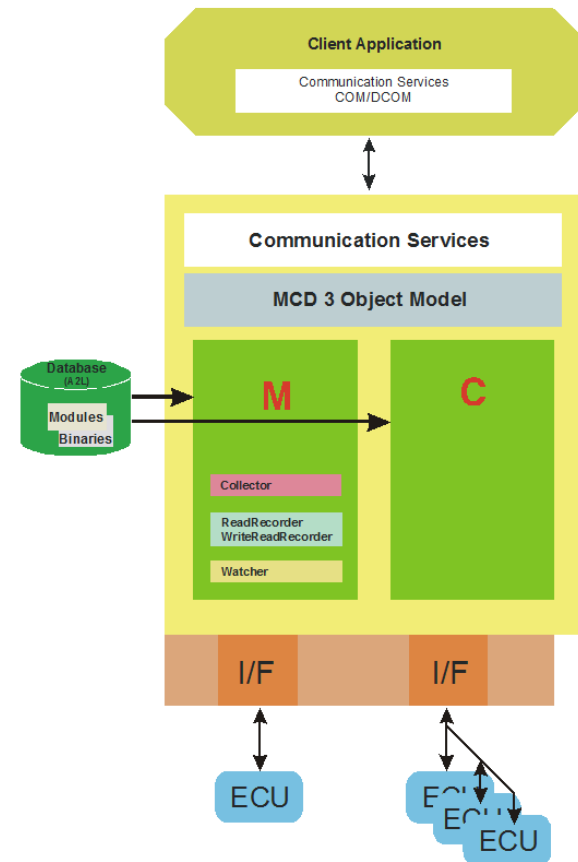
- COM

Introduction

This standard focuses on the description of an object oriented programming interface, called MCD-3MC, which is the access point for client applications.

The standard will be used for measurement and calibration purposes in the areas of design, production and testing of electronic control units in vehicles. Several ECU's may be accessed in parallel.

Main advantage is the encapsulation of the vendor specific vehicle communication interfaces, communication protocols and calibration concepts.

The MC-Server provides access to information of the MC tool database and thus enables single source access to project descriptions.

The capabilities of the MCD-3MC standard goes far beyond ASAP3. In addition to signal selection and data transmission, it also enables automated MC tool start and test preparation.

What's new (1)

- Separation of MC and D by removing D parts from this standard
  - ASAM MCD-3MC V3.0 was developed from ASAM MCD-3MC V2.2
  - Only the stereotypes MC, M and C are still available after separation from D

- Alignement to ASAP2 V1.6.1
  - Support CUBOID, CUBE_4, CUBE_5
  - Definition of STATUS_STRING_REF handling

- Efficiency Improvements
  - Support of connecting to an already established MC-Server configuration (enables change of tool configuration without need of automation sequence change, reduces project loading time)
  - Support of disconnect from Server without unloading server configuration (enables fast subsequent manual work)
  - Improvements in coupling / decoupling of client and server (improves alternating between manual and automated work)

What's new (2)

- Functional improvements
  - Support of automated exchanging of binaries by the MC-Client

- Multi Client Improvements
  - Notification of clients if calibration data was changed

- Detailing and adjustment of documentation
- 51 bugs have been resolved (see Appendix)
  - Source
    - Maintenance Group   MCD-3MC V2.2.1
    - Work Group   MCD-3MC V3.0

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Compatibility

- MCD-3MC V3.0 is based on MCD-3MC V2.2

- V3.0 is incompatible to V2.2 as result of removing D-Parts
    - Removing some unneeded layers in the model like „Vehicle Information" introduces an incompatibility which is resolvable by simple programmatic adaptations.
    - => All relevant vendors of Clients and Servers agreed on the slight incompatibility
    - => the benefit was rated much higher than the small migration effort

- Obsolete methods are marked as deprecated but can be used further until they are removed from the standard

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Apendix: 51 Solved Issues

bug_id	Priority	short_desc
343	P1	"AbsoluteActivationTime description inconsistent in spec"
345	P1	"MCDReadRecorder Timestamp base if no AbsoluteActivationTime available"
348	P1	"<<MCD>>eLS_LOCKED_BY_THIS_CLIENT and eLS_LOCKED_BY_OTHER_CLIENT to be removed eLS_LOCKED to be added"
353	P1	"MCDSystem state transition description"
1213	P1	"Is SelectProject and GetActiveProject equivalent related to MCSystem state?"
1230	P1	"Handling of ASAP2 Data Type using ""STATUS_STRING_REF"" tbd."
1231	P1	"Add Support of CUBOID, CUBE_4, CUBE_5 to MCD-3MC V3.0"
1232	P1	"Add support of 64bit Integers to MCD-3MC"
1233	P1	"Reduce the project loading time"
1239	P1	"Clarification of DbBinary Definition"
1240	P1	"User interactions in the Application System User Interface in parallel to the MCD3Server"
1241	P1	"Provide a possibility to connect to an already established configuration in the MC-Server"
1242	P1	"Provide a possibility to disconnect from a configuration in the MC-Server without unloading the configuration in the MC-Server"
1245	P1	"Default Phys format"
1253	P1	"Provide a possibility to exchange the binary(only Calibration Data) by the MC-Client Provide a possibility to Save a calibraiton data and load a calibraion data with established LLs (source/destination database / file)"
1254	P1	"Add a way of notifying the MC-Client if the Calibration Data was changed interactively in the server"
1255	P1	"Provide a possibility to use recorders which are already defined in the MC-System"
1977	P1	"Remove Recorders, Watchers and LogicalLinks from the cooperation level tables."
341	P2	"Wrong enumeration name eMCDRELATIVETIMETRIGGERSOURCE"
342	P2	"Semantic of Collector Start/Stop behaviour with configured StartDelay/StopDelay is not clear"
349	P2	"Lock / Unlock behaviour compared to other states inconsistent"
355	P2	"Parent method for DbObjects, that are no Proxies"
358	P2	"MCDRelativeTimeTriggerSource should deal with seconds not milliseconds"
360	P2	"MCDGlobal::Change semantics"
364	P2	"MCDCollectors::getCollectorID should be MCDCollector::getCollectorID"
382	P2	"Not all classes are listed in cooperation level tables"
1212	P2	"MCDSystem proxy destruction should cause disconnect of client"
1216	P2	"removeAll in cooperation level ""Extended Modification"" shall be forbidden"
1222	P2	"getLockState superfluous error codes"
217	P3	"Method documentation"
231	P3	"Enum MCDLockState"
344	P3	"AbsoluteActivationTime shall change MCDSystem.IsModified"
350	P3	"Switch from eDBPROJECT_CONFIGURATION to ePROJECT_SELECTED possible by any client?"
356	P3	"System state diagram and state eLOGICALLY_CONNECTED for MC"
359	P3	"Return types of getAvailableSamplesCount and fetchResults of MCDReadRecorderCollector"
527	P3	"Remove Player in Model"
1204	P3	"Proxy"
1205	P3	"LL Remove Precondition"
1208	P3	"onLinkVariantIdentified"
1209	P3	"onPrimitiveError"
1210	P3	"Error code eRT_OBJECT_DISCONNECTED still used in spec"
1215	P3	"Switch from eDBPROJECT_CONFIGURATION to ePROJECT_SELECTED possible by any client?"
1217	P3	"DataType, FillingLevel, Event"
1224	P3	"unlockTree reaction unclear for certain subobject states"
1225	P3	"Inconsistency in documentation: Required state for WriteReadRecorder::Export"
1243	P3	"MCDSystem::setPhysFormat"
1244	P3	"MCDSystem::getPhysFormat"
1269	P3	"Unsymetrie between DbCharacteristic and DbMeasurement"
220	P4	"Binary selection"
346	P4	"Descripton of Trigger Operator eTO_NOT is wrong"
1211	P5	"Unclear Sentences in Locking Chapter of Specification"

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Apendix: 6 Shifted Issues

The following issues have been shifted by the project team because the project budget has been exceeded and since they cause only minor problems for implementers:

bug_id	priority	short_desc
1587	P1	Cooperation Level Table for Recorders, Watchers, LogicalLink inconsistent; Remove methods for collections unclear
1203	P3	Error assignment
1206	P3	Add methods errors
1207	P3	MCDLogicalLink::Error
1223	P3	Time values have no time zone defined
1214	P4	propput description in IDLs is wrong