MXAM DRIVE: From Guideline Checker to Comprehensive Model Analysis

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Broad Analysis Spectrum

In addition to checking Simulink and TargetLink software models, a flexible adapter layer now enables you to check other development artifacts such as ASCET models. Furthermore, the new release offers check options for Excel spreadsheets, as these are often used to manage critical requirements in development projects.

As well as layout and structure-oriented checks, MES Model Examiner® can now perform in-depth model analysis as required by safety standards such as ISO 26262: Dataflow analysis verifies the consistency of data and interface definitions in a model, and automatically goes right to the signal source, even in the case of complex, encapsulated models. This saves a lot of time and effort in the review phase. Consistency verification for data interfaces is now equally extensive in scope. Furthermore, the structural complexity of a model or module can also be incorporated into the analysis with the help of the M-XRAY module.

Guideline Management

Previous versions of MES Model Examiner® were already able to check all the requirements of ISO 26262 on model level thanks to the provision of industry standards such as MISRA® SL/SF, MISRA® TL, MAAB, dSPACE TL, etc. as well as the MES Functional Safety Guidelines. Now, however, it is possible to manage, approve, compile, and configure guidelines and checks in addition to guideline checking. New company and project-specific guidelines can be compiled, expanded, and referred to individual function developers from the integrated guideline library. Guidelines and checks relating to functional safety, such as dataflow and interface consistency, both especially important for the ISO standard, have been consistently expanded.

Role-based Workflow

From Version 3.0, a role-based workflow is supplied to enable development, modification, and approval of new guidelines and checks. Only designated developers with the corresponding rights can modify guidelines and configure checks in specific projects. Checks of specific guidelines cannot, for example, simply be switched off when the results do not fit.

Multi-project Capability and New Reports

Different project configurations can be compiled and provided to a whole team using guideline documents, check objects, and ignore lists. Reporting, always a key functionality of the tool, has also been expanded. Excel reports are now available in addition to PDF and HTML reports. The ability to add comments and annotations to the report ensure that every error and non-executed check can be commented, for example if a correction has not been performed or is not possible.

Migration and Outlook

New functions and customer-specific adaptations will now generally be implemented in the new DRIVE

version of the MES Model Examiner®. MES offers a Migration Kit for migrating from previous to 3.x versions, enabling customer-specific guidelines and checks to be used in the new version without any difficulty.

Invitation to Upcoming Webinar: From Guideline Checker to Comprehensive Model Analysis

MES is holding a free, informative webinar on the new MES Model Examiner® 3.1 DRIVE for existing users and other interested parties. The focus of this webinar will be on the new functions the tool offers. The webinar will be held in English on two separate dates: on 17.06 from 16.00-17.00 CET and on 18.06 from 10.00-11.00 CET. You can register through the Meeting Center by clicking the following link: https://model-engineers-event.webex.com.

About MES GmbH: Läuft die Software, fährt das Auto

Model Engineering Solutions GmbH (MES) specializes in integrated quality assurance of embedded automotive software. MES Quality Commander® (MQC) is a dynamic management and control tool for use in software development projects, delivering key decision-making data throughout the product development lifecycle. MES Model Examiner® (MXAM) is the first choice for checking modeling guideline consistency of Simulink®, TargetLink®, and ASCET models. MES Test Manager® perfectly implements requirements-based testing in model-based development. MES provides individual consulting and services to companies seeking to introduce or enhance their model-based development processes, to introduce new technologies such as AUTOSAR, or to fulfill standards such as ISO 26262. MES clients include major OEMs and suppliers to the automotive industry worldwide. MES is a TargetLink® Strategic Partner of dSPACE GmbH and a MathWorks and ETAS Product Partner.

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