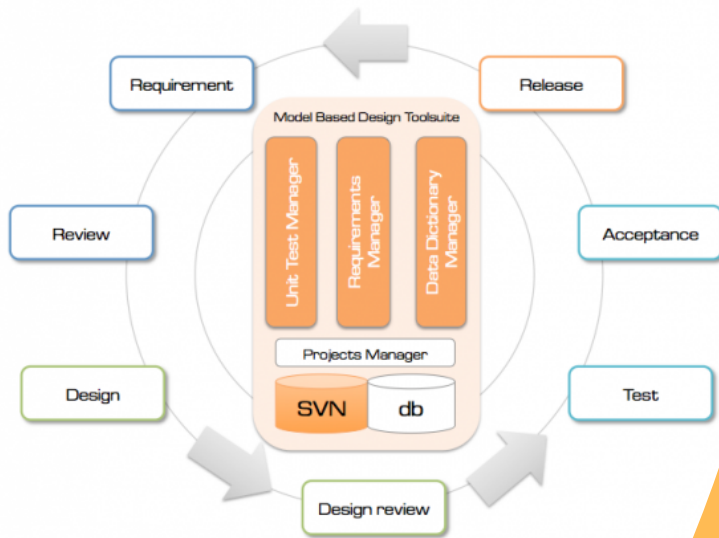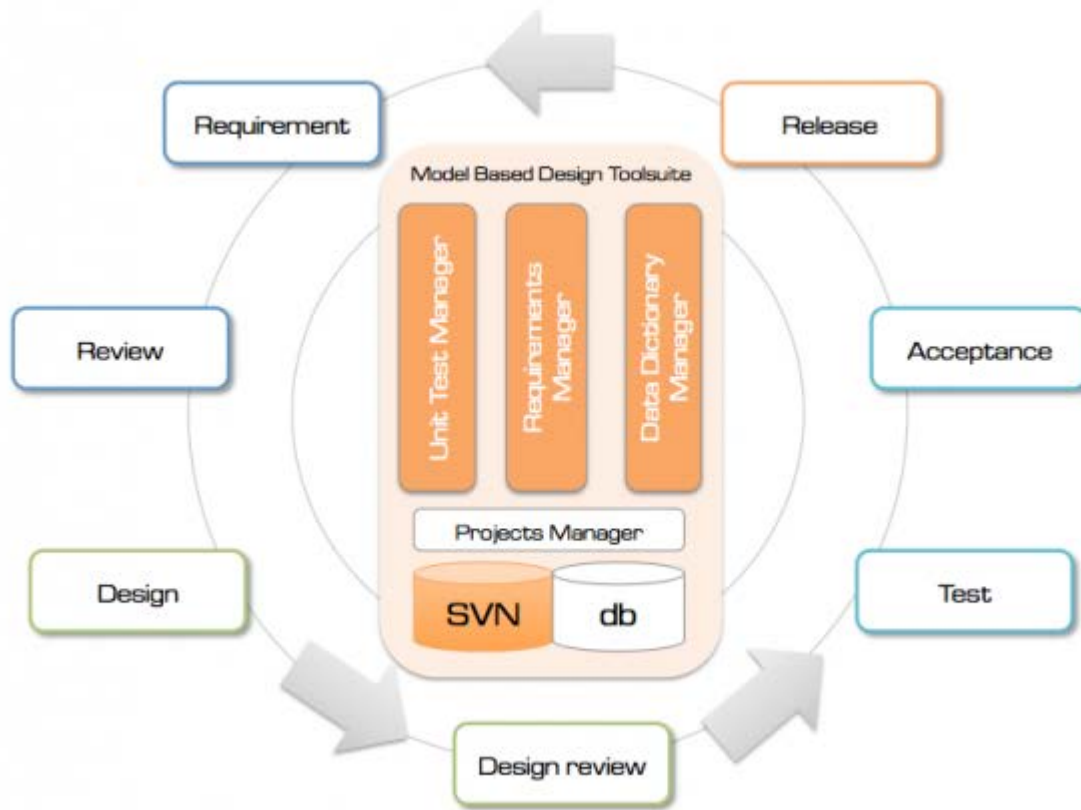# MonkeyProof Solutions

promod

Product Catalog
2014

Model Based Design Suite

The Model Based Design Toolsuite was developed with one clear goal in mind: Answering to the need of MATLAB engineers for tools that support the essentials workflow steps in design automation and model based design. That is why the Model Based Design Toolsuite consists of the following three integrated key products:

- Requirements Manager
- Unit Test Manager
- Data Dictionary Manager

Requirements Manager

MonkeyProof Requirements Manager provides a single-environment, full back-and-forth, multi-stage/ hierarchical traceability between requirements and decisions of different types and Simulink®/Stateflow implementation.

Intuitive interface

An intuitive interface allows for easy, hierarchical browsing, status inspection, and hyperlinked navigation from requirement to Simulink®/Stateflow implementation. Vice versa, requirements are visualized and hyperlinked on model objects for easy navigation from implementation to requirement.

A complete tool

The Requirements Manager supports user roles and permissions for usage in a collaborative and/or hierarchical design environment including formal review and approval. A variety of automated and customizable checks and reports are available such as verification if requirements are of the correct type, are linked to existing Simulink components, and if the implementation has been tested.

Full traceability

The Requirements manager provides full traceability from high level requirement to implementation by centrally keeping track of the relations and status of the requirements, decisions, and the link to implementation.
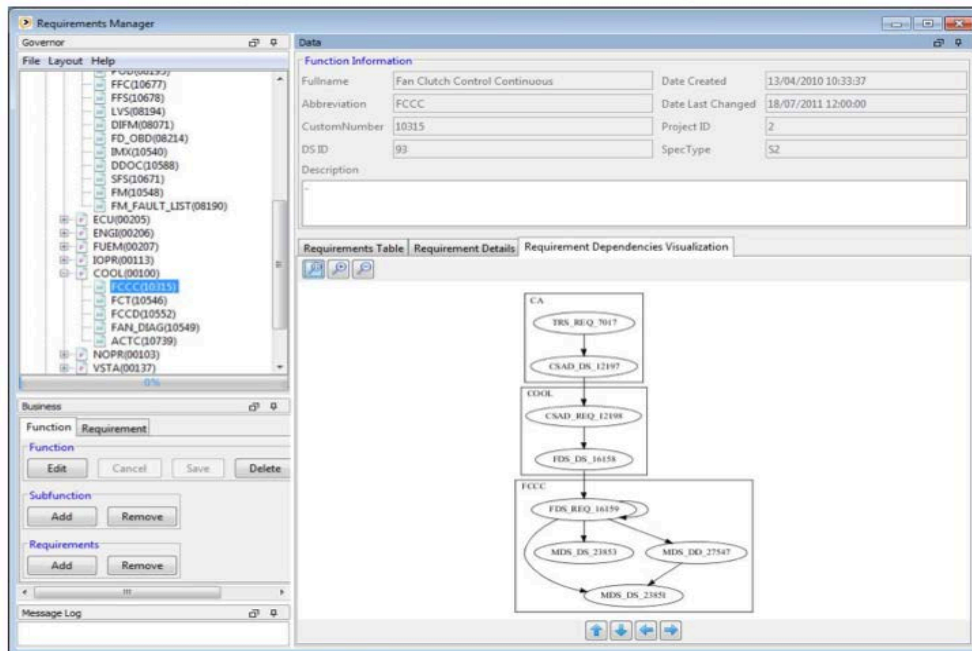
Requirements Manager dependency plot (bottom right) and hierarchical system overview in tree (top left)

Unit Test Manager

MonkeyProof Unit Test Manager provides a centralized, single-environment, automated and traceable environment for verification of Simulink® designs. Costs are cut by automating repeat testing and reporting necessary whenever a model changes, different parameters and/or different test scenarios apply, and when the hand written or automatically generated code for HIL or SIL testing is available.

Quality

Quality is impacted by making tests reproducible and by providing centralized traceability of test results to the requirement under test, to the applied parameter settings and test vectors under test, and to the model and model version under test.

Integration

It is tightly integrated with MonkeyProof Requirements Manager and MonkeyProof Data Dictionary Manager to provide full traceability and role and user based permissions when used in a hierarchical collaborative design environment.

Usability – one design environment

MonkeyProof Unit Test Manager is built to operate seamlessly with and within the familiar MATLAB/Simulink model based design environment of the engineer. No switching between different environments is required. It is integrated with MonkeyProof Requirements Manager to facilitate requirements based testing and easy verification.
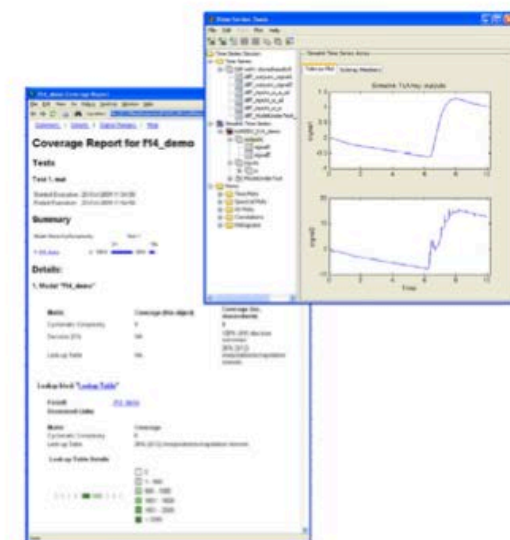

Sample coverage report and signal analysis using MathWorks® Time Series Tool

Data Dictionary Manager

MonkeyProof Data Dictionary Manager helps you thoroughly organize data objects in your Simulink® designs and prevent loss of overview when data objects are stored in the workspace. Data is explicitly separated from the model facilitating reuse of Simulink® designs across design- and engineering-stages and projects.

Full functionality from a single interface

Data Dictionary Manager lets you create (generate), search, modify, and export data objects of any (custom) class. It lets you interactively structure your data by grouping data objects, it lets you check on data completeness and style guide compliance, and it facilitates in generating a variety of useful reports on your data dictionary. All from a single intuitive user interface.
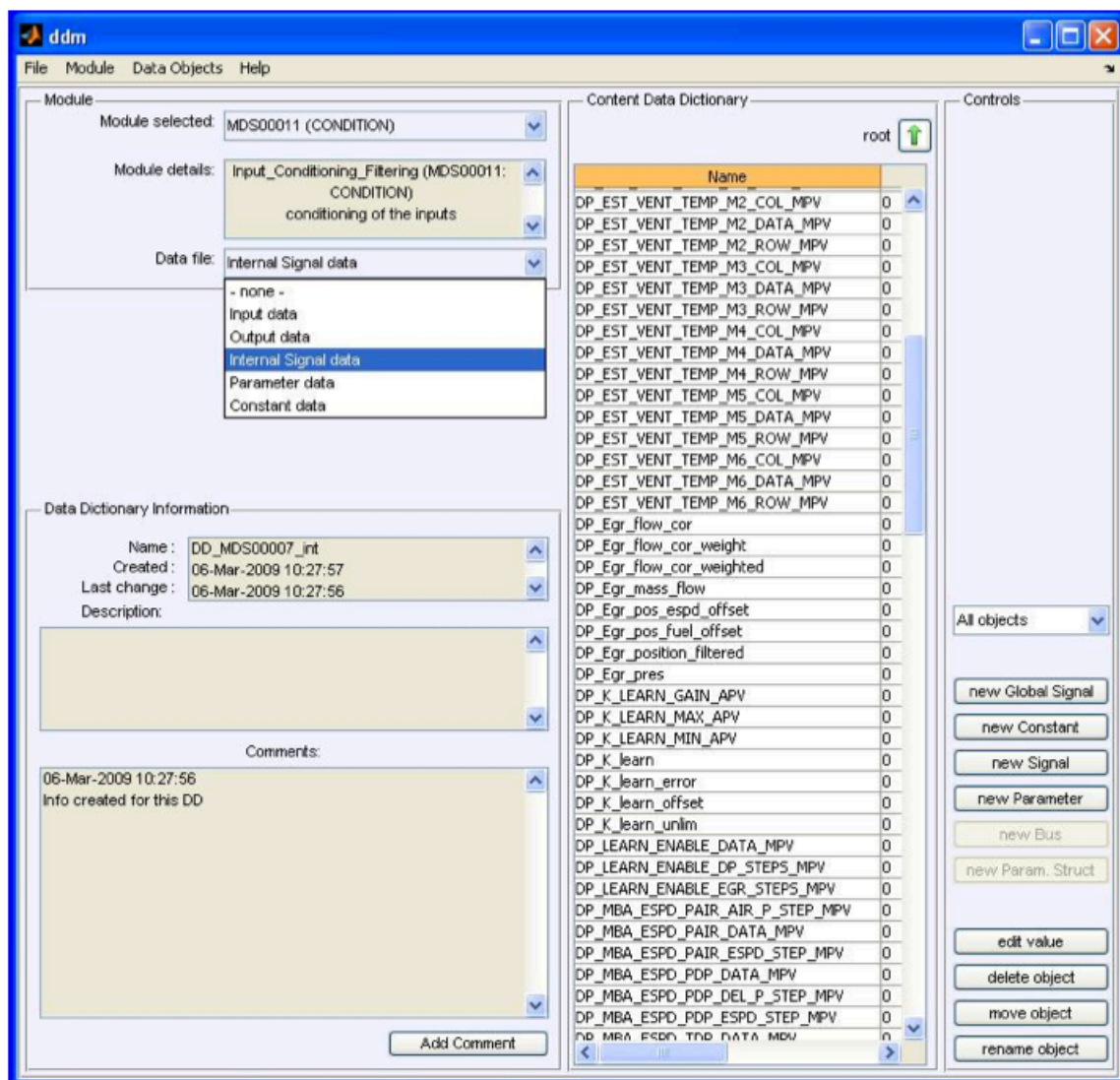
Main interface of the Data Dictionary Manager
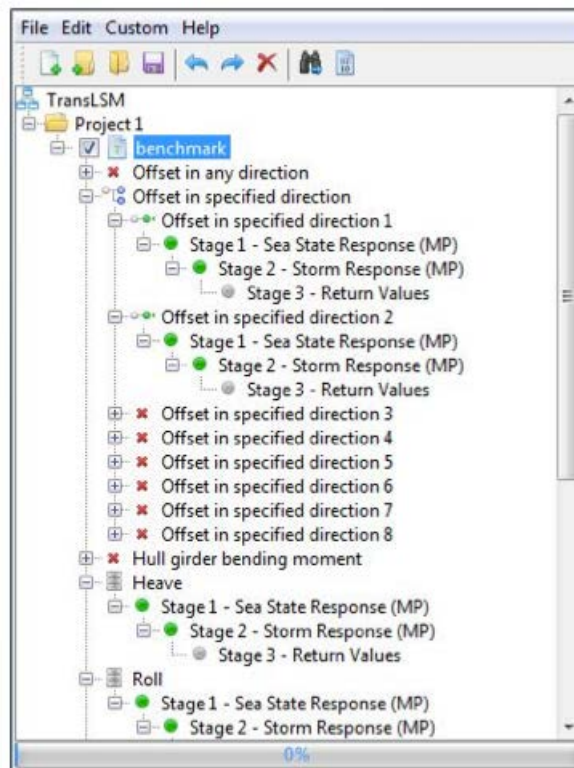
MATLAB Applications Framework

MATLAB for production

Aimed at production environments, MonkeyProof Solutions has developed a framework for MATLAB based applications that brings inherent robustness, user friendliness, traceability, data management, and workflow management.

In many organizations subject matter experts use MATLAB for design space exploration, new algorithm development, and number crunching. Once the newly developed algorithms are proven they may need to be rolled out to a larger community that may not be as familiar with MATLAB. This larger community has different needs from a robustness and user friendliness perspective than the typical R&D engineer.The MonkeyProof MATLAB Applications Framework supports a single code base for algorithmic MATLAB (and legacy) code whilst GUI performance, GUI look and feel, GUI MATLAB-release compatibility, and speed of deployment (or time to market) are greatly enhanced.

Governor

For project overview, control and for progress and status monitoring the frameworks provides an application governor: an interactive, dynamic tree view of the application that facilitates project, job, and scenario management.

Governor example