

Schindler Automates Physical Model Verification Framework Using Simulink Test

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At Schindler, the model development cycle follows the scrum methodology. In each sprint of four weeks, the development focus is to improve the accuracy of physical models as well as include additional features and variants of the main controller. The challenge is to automate verification tests of models, which involves time series–based physical signals. Because the interfaces and logic of the models change in response to new requirements, they needed to create a framework that allows the maximum reuse of the test harnesses and minimum rework on defining test cases.

Schindler developed an automated test framework called Models' Automated Test Harnesses (MATHS) using Simulink Test™ to perform system-level and model-in-the-loop (MIL) tests for subsystem components. With Simulink Test, Schindler engineers can create test harnesses and write corresponding test cases.

Advantages of using MATLAB and Simulink:

- Test time reduced from 1–2 weeks to 2 days
- Test execution synchronized with Jira ticket closure (triggered by Simulink Project branch merge)
- No manual intervention needed, except for harness modification and test case addition

“ Simulink Test is central to all our MIL verification and validation activities. With the **parallel test execution** using Parallel Computing Toolbox™, we can substantially **increase the number of configurations** to be tested. ”

Elevator System Models Tool Chain

