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# INTEGRATING SIMULATION OPTIMIZATION WITHIN THE MODELING PLATFORM: MATLAB, SIMULINK AND SIMEVENTS

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## ABSTRACT

A major new update to SimEvents enables you to leverage the power of the MATLAB language to express discrete-event simulation models. In the new version, MATLAB can be written and executed for Event Actions, such as Entity Generation, Service, or Departure, which can be a more natural approach for expressing lower-level model details. New flexible authoring capabilities have also been added to allow the modeler to specify custom discrete-event systems with object-oriented MATLAB code or state charts with specialized MATLAB actions, which enables the development of complex, customized model components. The MATLAB code used to describe event actions and systems can involve optimization and machine learning algorithms to facilitate inline tuning of system behavior via parameter changes within a simulation run. An example from medical device manufacturing will show the integration of simulation optimization within the modeling platform using MATLAB, Simulink and SimEvents.