

ADEX Toolkit for Simulink

The ADEX Toolkit for Simulink provides control engineers with the necessary tools to apply the ADEX control methodology in their process control schemas. Using the ADEX Toolkit for Simulink combines the benefits of both the adaptive predictive expert (ADEX) control methodology with the possibilities available within the MATLAB simulation environment, which is popular in both the industrial and academic realms. The ADEX Toolkit for Simulink includes both Help documents that briefly explain the toolkit's blocks, as well as a complete user manual. It also comes with an illustrative example of ADEX application which can be accessed via the Help function of the toolkit.

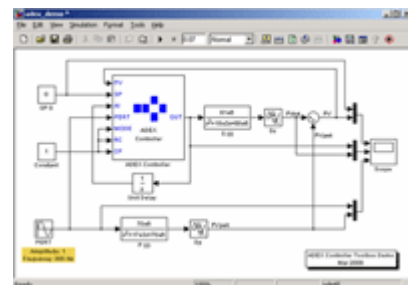


- All the benefits offered by the ADEX Control Methodology now available for use within Simulink.
- ADEX Controllers can be easily integrated into the Simulink control schema as designed by the user.
- The ADEX Controller Toolkit has additional functions that allow for accessing controller parameters.
- The ADEX Toolkit Installer includes the ADEX Configurator whose intuitive graphic interface allows the user to easily configure the implemented controllers.

Description

Integration of ADEX Controllers

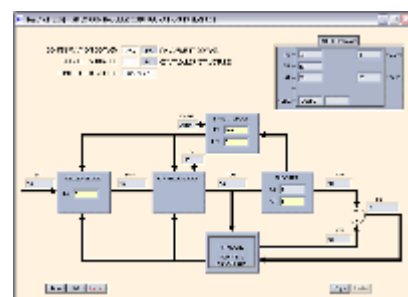
Once the ADEX toolkit has been installed in Simulink, the integration of an ADEX Controller in a process control schema of Simulink is fast and straightforward. The controller is integrated in the users control schema by means of the ADEX Controller library of the Simulink Library Browser, in the same way as other blocks available in Simulink. ADEX Controllers allow for a configuration of up to 9 inputs and 3 outputs, for the control of multivariable processes with measurable perturbations.



ADEX Toolkit Example

Additional Function Blocks

Two more additional function blocks accompany the controller in the ADEX Controller library. These additional parameter reading and writing blocks make it possible for the user to modify the configuration of ADEX Controllers directly within the schema during the simulation. The identification of each parameter is possible thanks to an associated number which can be obtained by means of the parameter search tool, which is available in the Help function of the toolkit.



ADEX Configurator

ADEX Configurator

The standard way to define the parameters of a Controller is to use the ADEX Configurator; a tool which is characterized by its user friendliness. In the ADEX Configurator, the Controller and its different blocks are presented graphically, which makes it easier to understand and to set the parameters value. The Configurator can be accessed via the Desktop and from the Start Menu.