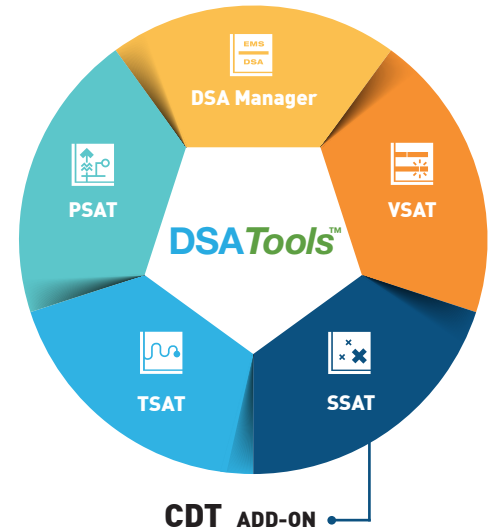


# CDT Control Design Toolbox

Control Design Toolbox (CDT) is a software tool that offers a systematic way to tune power system stabilizers (including the addition and tuning of new stabilizers) by taking advantage of the comprehensive modeling and computation options available in DSATools™.



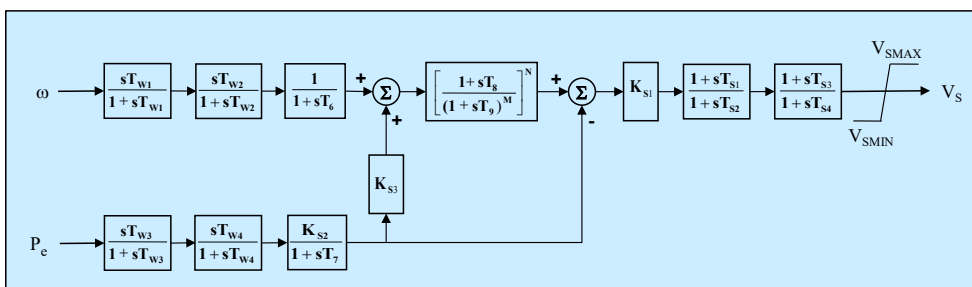
Power system stabilizers (PSS) have been extensively used in power systems as a very effective means to provide damping control for electro-mechanical oscillations. Successful application of power system stabilizers depends on the careful design of their functional structure and regular tuning of their parameters in order to accommodate the ever changing and evolving system characteristics and conditions. Traditionally, the tuning of power system stabilizers has been a challenging task involving the use of a variety of tools and techniques with extensive human expertise and interaction.

The Control Design Toolbox provides a set of specially designed interfaces and options that guide the user through a complete PSS tuning process. Most of the computations required are performed by automatic calls to the appropriate programs in DSATools™ or MATLAB®.

## PSS TUNING OPTIONS

Two PSS tuning objectives are available to suit different applications:

- Tuning for inter-area modes:** This computes all inter-area modes in a specified frequency range and then identifies the generators that have best controllability to the critical modes. PSS will be tuned on these generators to achieve the best possible damping to the modes.
- Tuning for individual generators:** This focuses on tuning PSS for specified generators for damping improvement of all modes associated with the generators.



## PRODUCT FEATURES:

- Easy-to-use GUI guides the user through complete power system stabilizer (PSS) tuning procedure
- Tuning can be done for individual generators or for specific inter-area modes
- Field-proven tuning method
- Support for common PSS models and input types
- Fully integrated with MATLAB® and Powertech's DSATools™

# CDT Control Design Toolbox

## PSS can be tuned with one of two methods:

- Manual method, which allows tuning individual stabilizers with customized parameters so as to achieve the desired results.
- Automatic method, which allows effectively tuning of a large number of PSS with a set of pre-specified parameters.

## MAIN FEATURES

- Field-proven PSS tuning method.
- Customizable PSS parameters and tuning constraints.
- Supports a variety of common PSS models and input types.
- Handles very large power system models (up to 100,000 buses and 15,000 generators).

## SPECIFICATIONS AND REQUIREMENTS

- Runs on MS Windows 7/10/server 2012 R2/server 2016

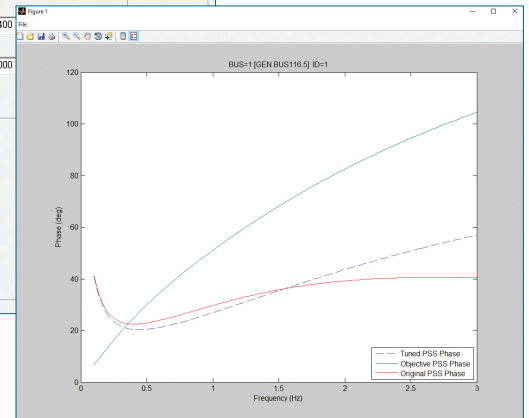
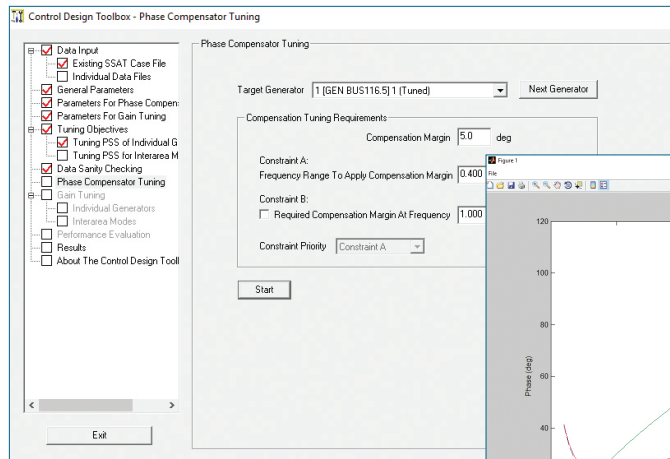
## OTHER POWERTECH SERVICES

- Licensing of the power system analysis software package DSATools™
- Licensing of other software products for utility applications
- Implementation of on-line dynamic security assessment (DSA) systems
- Development of custom software systems
- Development of models for use in power system analysis
- Generator field testing, model development and validation
- Training

## FOR MORE INFORMATION CONTACT:

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- Compatible model and data requirements with DSATools™ and major third-party software.
- Creates automatically Word and text report with PSS tuning details and results.
- Wizard-type graphical user interface to guide through a complete PSS tuning procedure.

## ABOUT POWERTECH LABS

*Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.*

*Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.*

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