

Exploration of Co-Simulation using MATLAB® Simpower System and Gas Turbine(GT) Simulator

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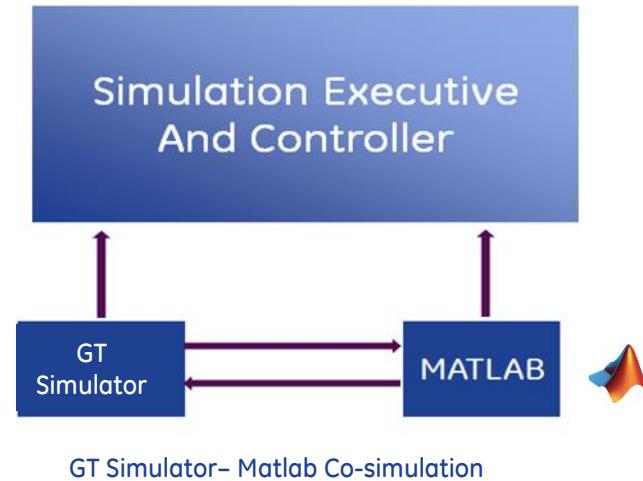
Motivation

GT Simulator-Matlab
co-simulation limits
complex models

Current practices are
independent
simulation platforms

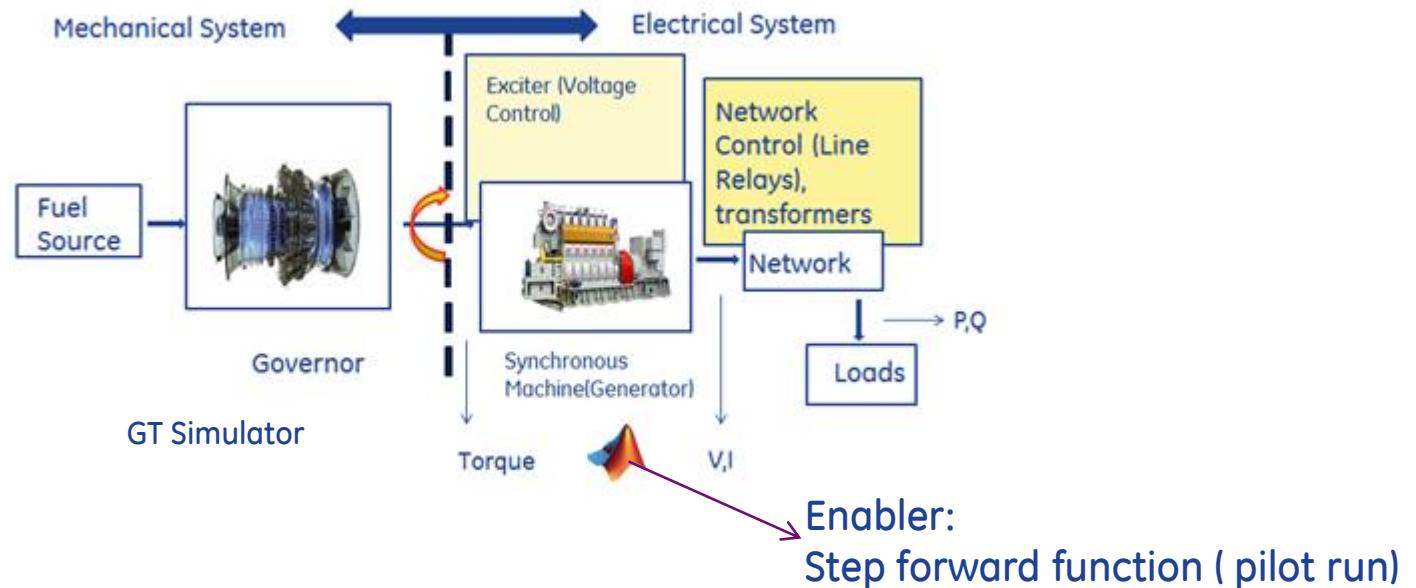
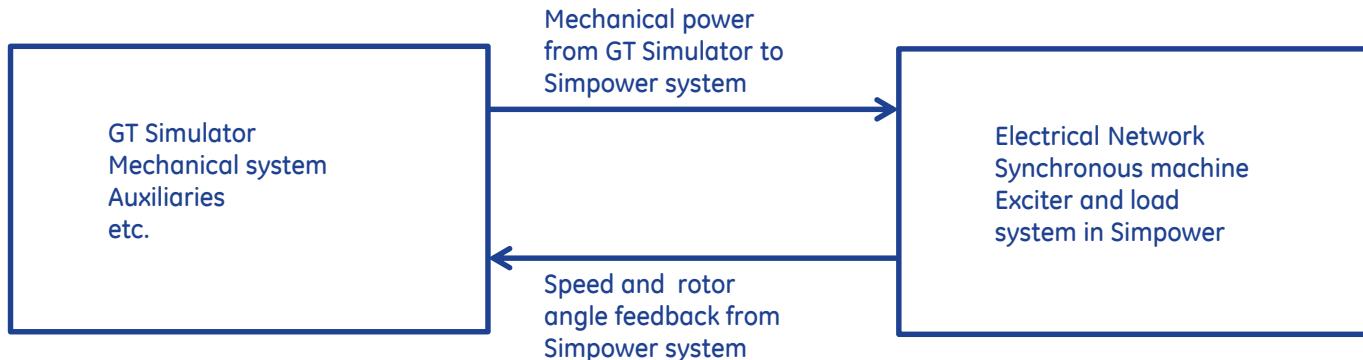
Stiff system with
different time delay
and time constants

Enabling maximum utilization of legacy library.



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Case Study- Electrical Simulation



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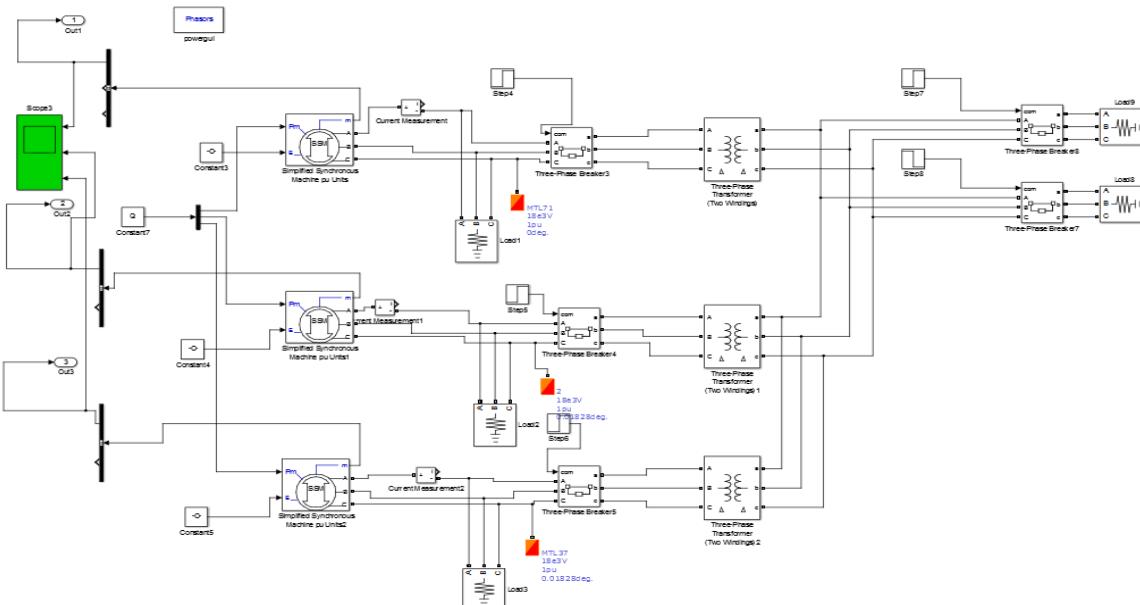
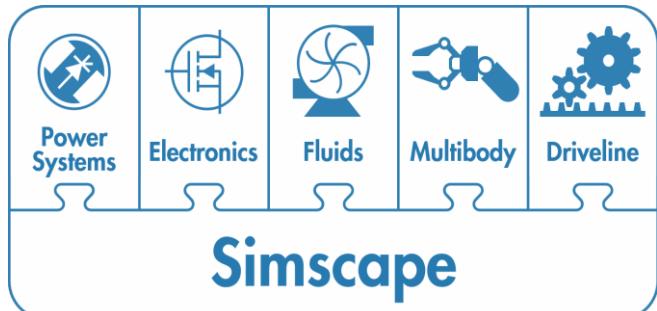
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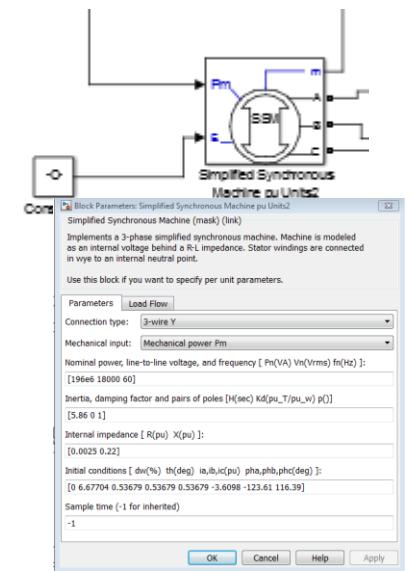
Modeling Electrical System in Simpower- Simscape

Advantage

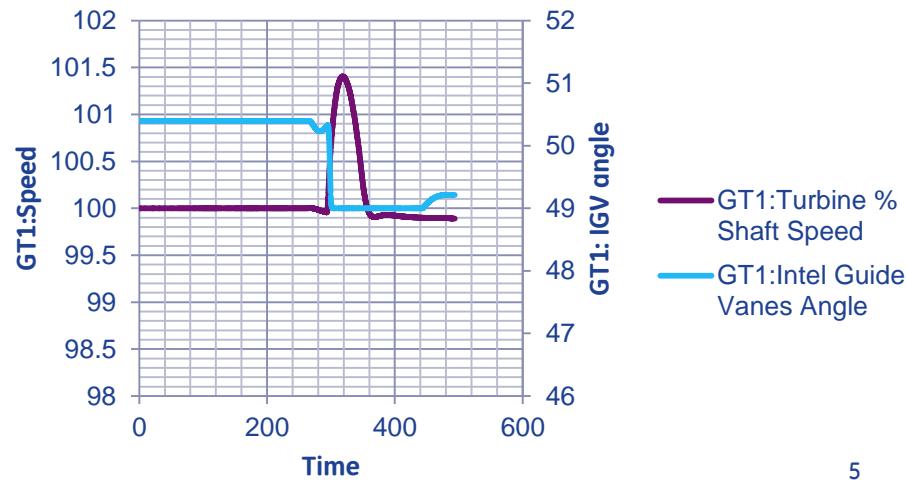
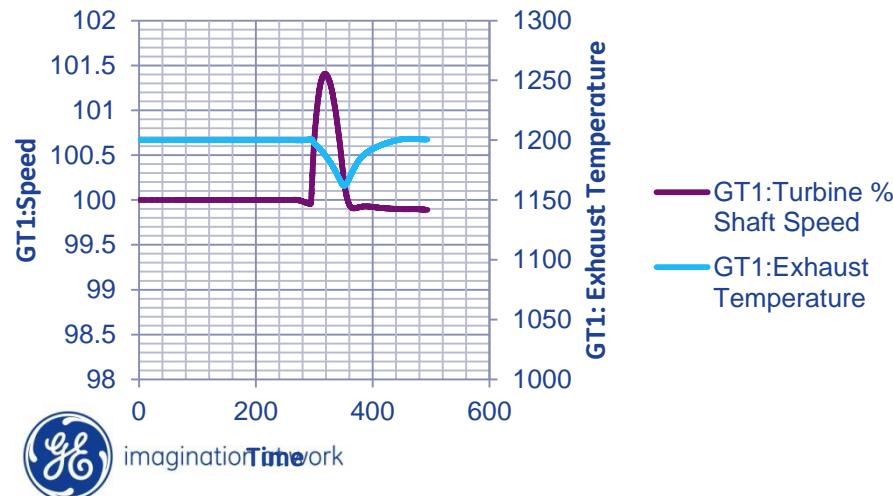
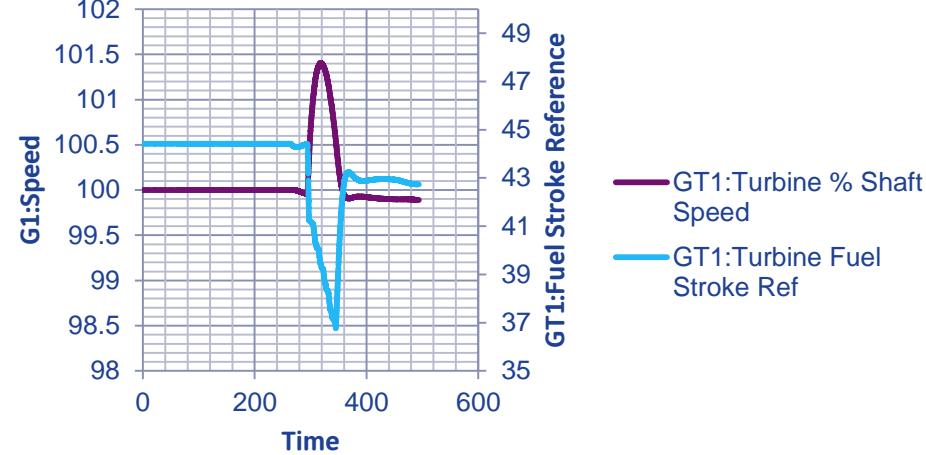
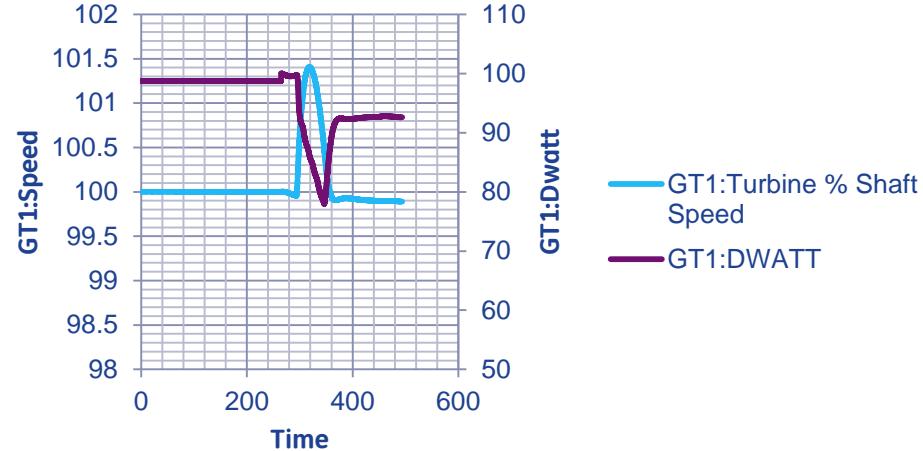
- Eases process of modeling physical systems
- Build models that reflect structure of physical system
- Leverage MATLAB to create reusable models.
- Both phasor and time domain approaches are possible.
- Systems and Control Engineers can handle large electrical simulations.



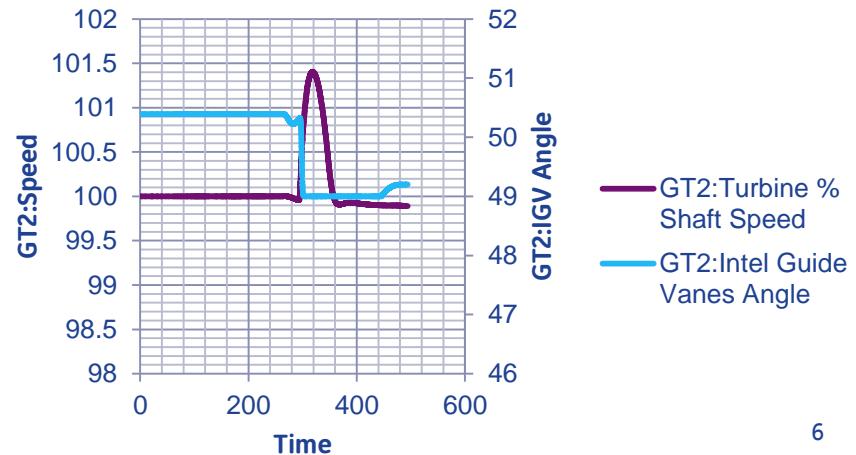
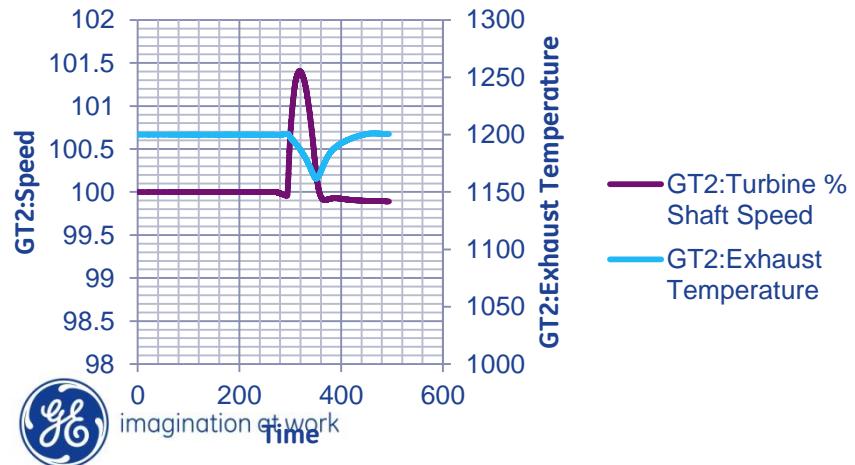
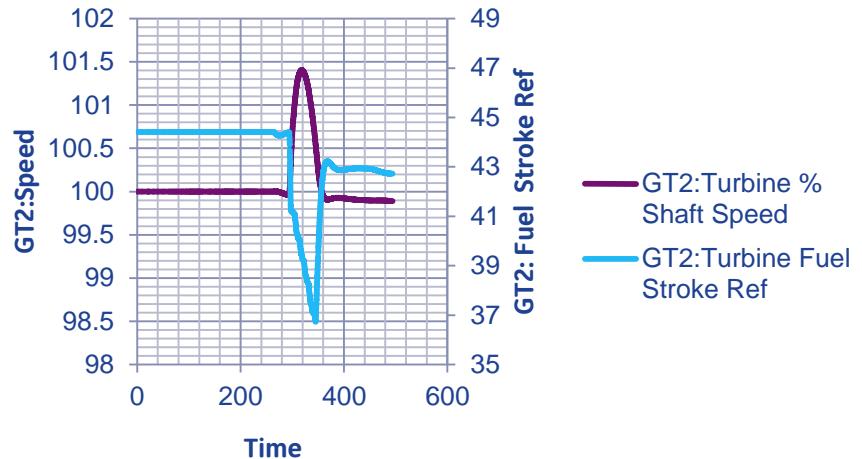
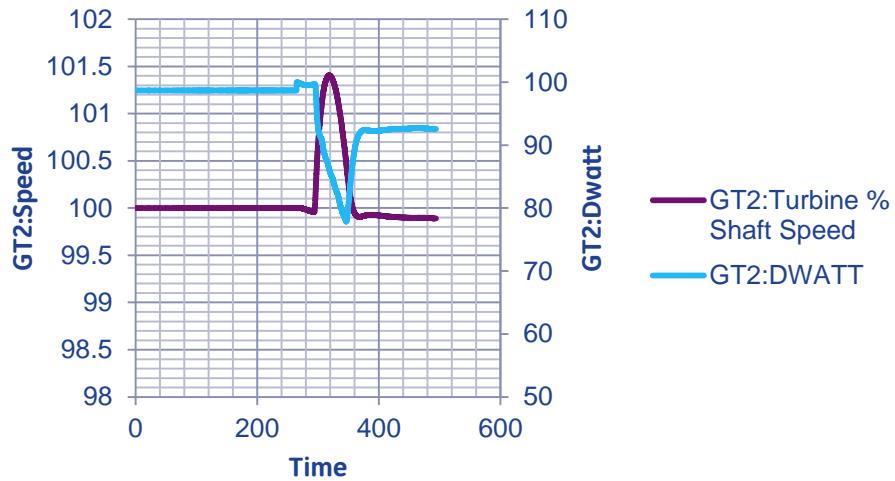
Synchronous machine



Results and Discussion



Results and Discussion



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Thank you.



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