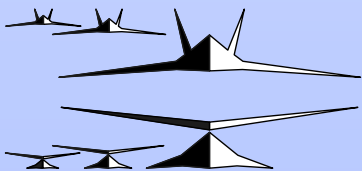


Robert Heffley Engineering

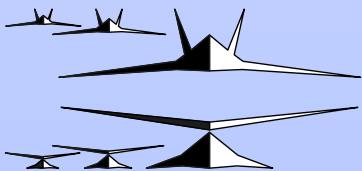
Penn Valley, CA

ACGSC Meeting 115
Portland, OR
4-6 March 2015



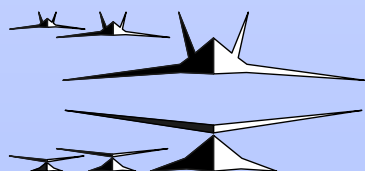
Recent Projects

1. Upgrades to Boeing Training Systems with additional *RotorGen2* helicopter math models—CH-47, CH-53, Bo105, UH-1, AH-1, MD500, UH-60, S-64
2. Support to STI with shipboard environment and dynamic interface simulation (MH-60/DDG) with ship motion and turbulence disturbances
3. Continuation of in-house development for RHE Simulation Software Suite, an integrated *RotorGen2*, Simulink and FlightGear engineering tool



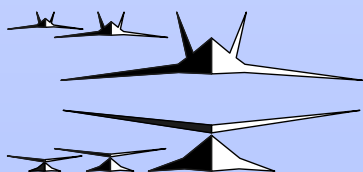
Support for Boeing's *NetForce* and *BigTac* training systems

- *RotorGen2* used as common model form,
- Pilot model structure common to all aircraft.
- 8 helicopter math models now available,



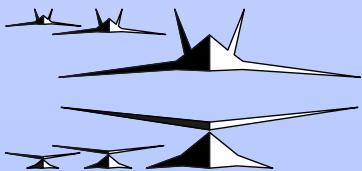
Dynamic-Interface Simulation Support for STI

- RotorGen2 helicopter math model in RGenWin
- Integrated into Simulink with RGenWin S-function
- Ship motion disturbance portrayed with FlightGear models of DDG and MH-60
- For support of STI pilot display development



RHE Simulation Software Suite Development

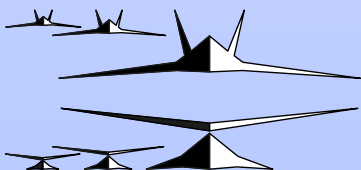
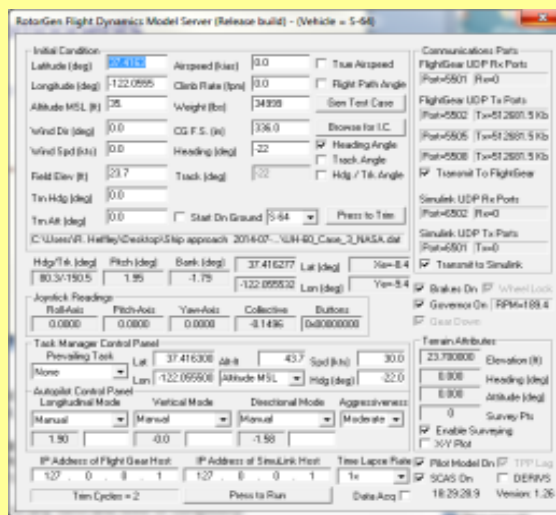
- Extension of RGenWin Task-Pilot-Vehicle model app
- Integrates RotorGen2, Simulink, and FlightGear
- Broad range of engineering, design features—flt control design, task demo, monte carlo, etc



Basic Suite Components

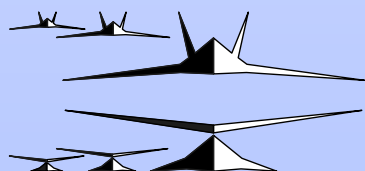
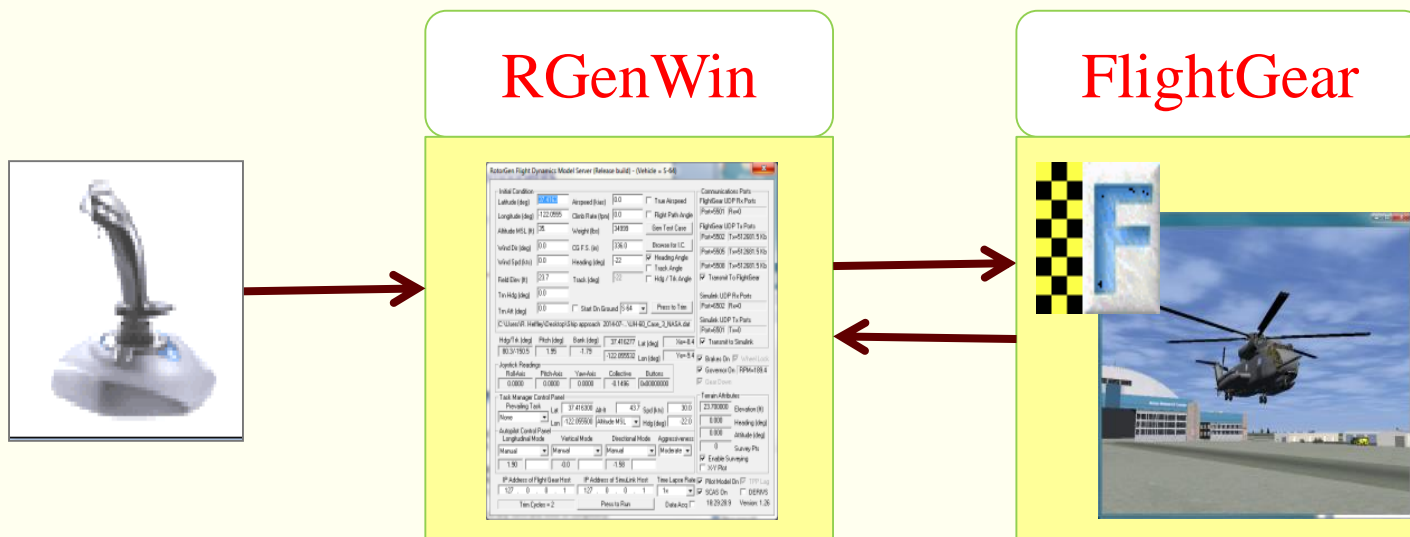
- *RGenWin* GUI only

RGenWin.exe



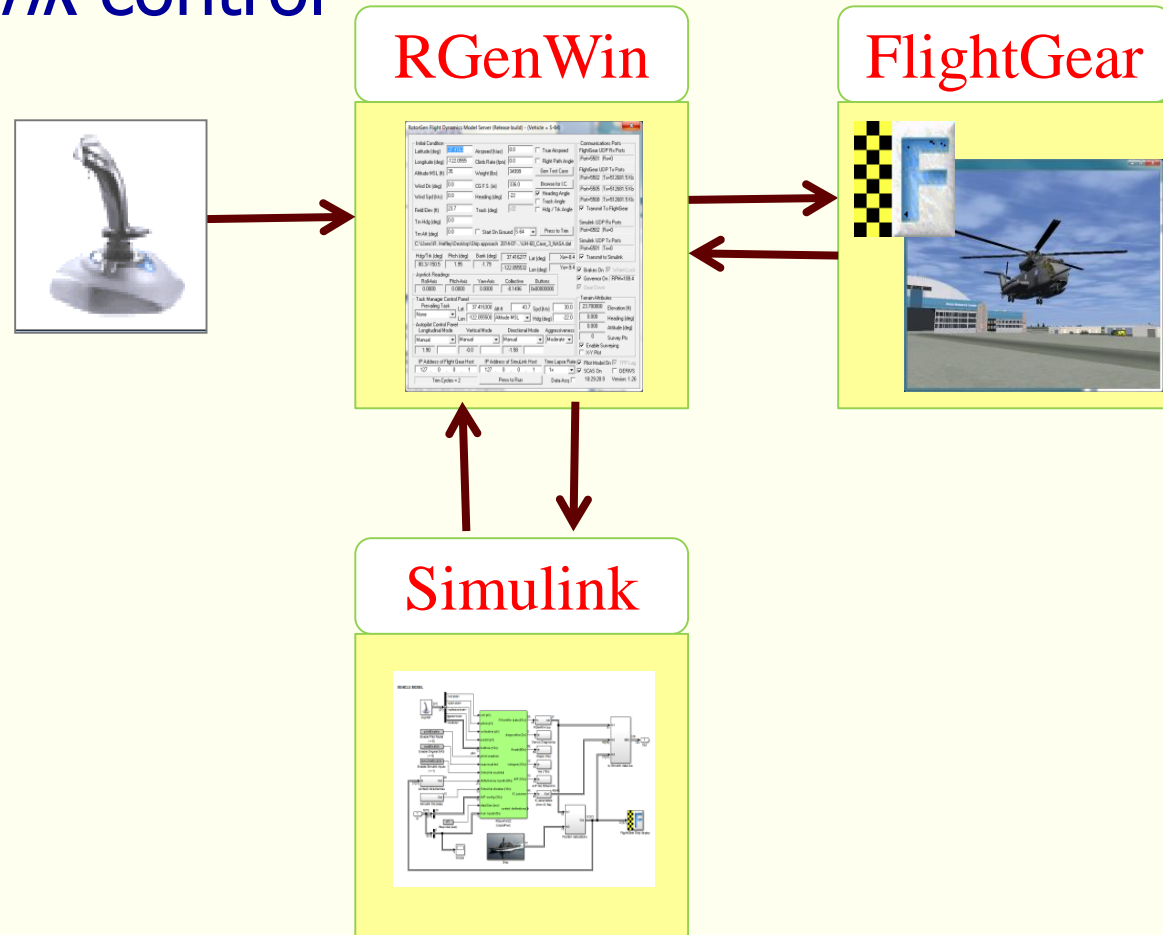
Basic Suite Components

- *RGenWin* with joystick and *FlightGear* visuals



Basic Suite Components

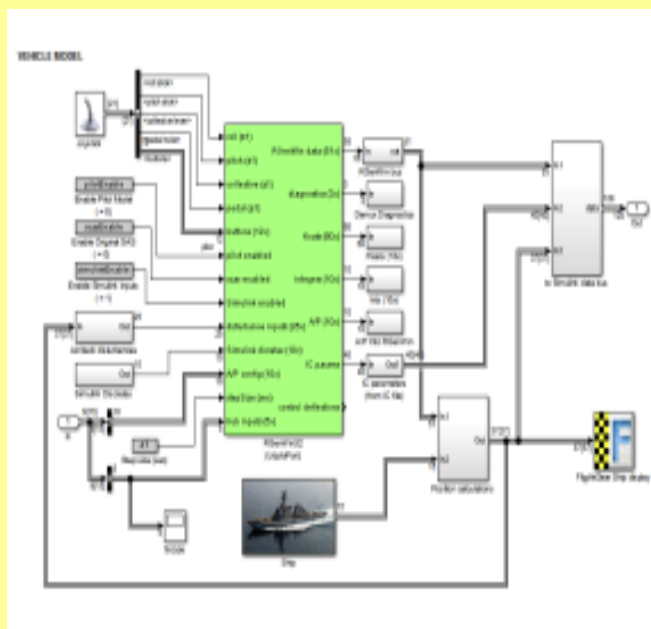
- *RGenWin* with joystick, *FlightGear* visuals, and *Simulink* control



Advanced Configurations

- *Simulink* with *RGenWin* embedded as S-fn

Simulink



Announcement: *RGenWin* Demo Pkg

- Initially available to ACGSC members
- To include
 - ❖ RGenWin GUI,
 - ❖ Simulink platform capability,
 - ❖ an existing rotorcraft flight dynamics model,
 - ❖ accompanied by a modified FlightGear 3D model
- Quickstart documentation for running demo
- Upgradeable to expanded capability and customization
- Available late spring or early summer

