

Report: Generated model for synthesis

Report_2024-09-02_16h46m45s

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02-Sep-2024

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Chapter 1. Chapter 1: Introduction

1.1. Section 1.1: User selection in the GUI

The user has provided the following inputs in the user in the GUI. See following figure.

Actuators	Disturbances
<input checked="" type="checkbox"/> Reaction wheels [RWa] <input type="checkbox"/> Thrusters/Reaction Control system [RCSa] <input type="checkbox"/> Micro-Propulsion System [MPSa] <input type="checkbox"/> Fast-Steering Mirror [FSMa] <input type="checkbox"/> Proof-Mass Actuators [PMAa]	<input checked="" type="checkbox"/> External disturbances [EXTd] <input type="checkbox"/> Solar Array Drive Mechanism [SADMd] <input type="checkbox"/> Reaction wheel Forces/Torque [RWd] <input type="checkbox"/> Baseline model (All disturbance considered)
Sensors	Performance outputs
<input checked="" type="checkbox"/> Star tracker [SST] <input checked="" type="checkbox"/> Coarse Gyro [GYROc] <input type="checkbox"/> Fine Gyro [GYROf] <input type="checkbox"/> Fine Guidance Sensor [FGS] <input type="checkbox"/> Accelerometer at mirror 1 [ACCm1] <input type="checkbox"/> Accelerometer at mirror 2 [ACCm2] <input type="checkbox"/> Accelerometer at detector [ACCdect] <input type="checkbox"/> Fast-Steering Mirror [FSM]	<input checked="" type="checkbox"/> APE <input type="checkbox"/> RPE <input type="checkbox"/> PDE

The model "ModelSyn_selected" is an uncertain state-space with:

- 15 inputs;
- 15 outputs;

Here is the list of selected inputs of the model:

- dn_EXTd(1)
- dn_EXTd(2)
- dn_EXTd(3)
- Tin(1)
- Tin(2)
- Tin(3)
- Nn_SST(1)
- Nn_SST(2)
- Nn_SST(3)
- Nn_GYROc(1)
- Nn_GYROc(2)
- Nn_GYROc(3)
- out_cmd_RWa(1)
- out_cmd_RWa(2)
- out_cmd_RWa(3)

Note that the last elements (with the string starting with "out_cmd_" correspond to the outputs of the controller (i.e. the inputs of the system)

Here is the list of selected outputs of the model:

- APE(1)
- APE(2)
- APE(3)
- Tstab(1)
- Tstab(2)
- Tstab(3)
- un_RWa(1)
- un_RWa(2)
- un_RWa(3)
- in_cmd_theta_SST(1)
- in_cmd_theta_SST(2)
- in_cmd_theta_SST(3)
- in_cmd_thetad_GYROc(1)
- in_cmd_thetad_GYROc(2)
- in_cmd_thetad_GYROc(3)

Note that the last elements (with the string starting with "in_cmd_" correspond to the inputs of the controller (i.e. the measurements of the system)