Simulink Design Verifier Report

AHRS_voter

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Chapter 1. Summary

Analysis Information.

Model:	AHRS_voter
Mode:	Test generation
Test generation target:	Model
Status:	Completed normally
Analysis Time:	27s

Objectives Status.

Number of Objectives:	**2**
Objectives Satisfied:	2

Chapter 2. Analysis Information

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Model Information

File:	AHRS_voter
Version:	1.56
Time Stamp:	Thu Oct 25 13:07:27 2018
Author:	bpotter

Analysis Options

Mode:	TestGeneration
Test generation target:	Model
Test Suite Optimization:	IndividualObjectives
Maximum Testcase Steps:	10000time steps
Test Conditions:	UseLocalSettings
Test Objectives:	UseLocalSettings
Model Coverage Objectives:	MCDC
Include Relational Boundary Objectives:	on
Floating point absolute tolerance:	1.0000e-05
Floating point relative tolerance:	0.0100
Maximum Analysis Time:	300s
Block Replacement:	off
Parameters Analysis:	off
Include expected output values:	on
Randomize data that do not affect the outcome:	off
Additional analysis to reduce instances of rational approximation:	on
Save Data:	on
Save Harness:	off
Save Report:	on

Constraints

Design Min Max Constraints

Name	Design Min Max Constraint
AHRS1	[-180..180]
AHRS2	[-180..180]
AHRS3	[-180..180]

Chapter 3. Test Objectives Status

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Objectives Satisfied

Simulink Design Verifier found test cases that exercise these test objectives.

#	Type	Model Item	Description	Analys-is Time (sec)	Test Ca-se
1	Decisi-on	MultiportSwitch	integer input value = **0 (o-utput is from input port 0)**	26	1 [6]
2	Decisi-on	Mid_Value/MinMax3	Logic to determine outp-ut element 3 **input 2 is the maximum**	26	2 [6]

Chapter 4. Model Items

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This section presents, for each object in the model defining coverage objectives, the list of objectives and their individual status at the end of the analysis. It should match the coverage report obtained from running the generated test suite on the model, either from the harness model or by using the sldvruntest command.

MultiportSwitch

#:	Type	Description	Status	Test Case
1	Decision	integer input value = 0 (output is from input port 0)	Satisfied	1 [6]

Mid_Value/MinMax3

#:	Type	Description	Status	Test Case
2	Decision	Logic to determine output element 3 input 2 is the maximum	Satisfied	2 [6]

Chapter 5. Test Cases

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This section contains detailed information about each generated test case.

Test Case 1

Summary.

Length:	0 second (1 sample period)
Objectives Satisfied:	1

Objectives.

Step	Time	Model Item	Objectives
1	0	MultiportSwitch	integer input value = 0 (output is from input port 0)

Generated Input Data.

Time	0
Step	**1**
AHRS1	[-180 -180 -180 -180 -180]
AHRS2	[-180 -180 -180 -180 -180]
AHRS3	[-180 -180 -180 -180 -180]
AHRS1_Valid	0
AHRS2_Valid	0
AHRS3_Valid	0

Expected Output. These output values are expected assuming that inputs that do not affect the test objectives (- in the table above) are given a default value - 0 for numeric types, and default value for enumerated types.

Time	0
Step	**1**
voted_fb	[0 0 0 0 0]

Test Case 2

Summary.

Length: 0 second (1 sample period)
Objectives Satisfied: 1

Objectives.

St-ep	Ti-me	Model Item	Objectives
1	0	Mid_Value/MinMax3	Logic to determine output element 3 input 2 is the maximum

Generated Input Data.

Time	0
Step	**1**
AHRS1	[-180 -180 -180 -180 -180]
AHRS2	[-180 -180 -179 -180 -180]
AHRS3	[-180 -180 -178 -180 -180]
AHRS1_Valid	1
AHRS2_Valid	1
AHRS3_Valid	1

Expected Output.   These output values are expected assuming that inputs that do not affect the test objectives (- in the table above) are given a default value - 0 for numeric types, and default value for enumerated types.

Time	0
Step	**1**
voted_fb	[-180 -180 -179 -180 -180]