Coverage Report for ex4_statecart

Table of Contents

Analysis Information

Coverage Data Information

Collected in version	(R2024a)

Model Information

Model version	1.24
Author	erfuu
Last saved	Mon Jan 06 17:24:40 2025

Harness information

Harness model(s)	ex4_statecart_Harness1
Harness model owner	ex4_statecart

Simulation Optimization Options

Default parameter behavior	inlined
Block reduction	forced off
Conditional branch optimization	on

Coverage Options

Analyzed model	ex4_statecart_Harness1/Chart1
Logic block short circuiting	off

Aggregated Tests

Run	Test Name	Date

Subsystem: "/Chart1"		
U1.1	test_start_on	06-Jan-2025 18:06:48
U1.2	test_start_on_off_shut	06-Jan-2025 18:06:50
U1.3	test_start_dec_inc_shut	06-Jan-2025 18:06:52
U1.4	test_on	06-Jan-2025 18:06:54
U1.5	test_start_on_inc_shut	06-Jan-2025 18:06:56

Summary

Model Hierarchy/Complexity

		Decision	Execution
1. Chart1	13	100%	NA
2. . . . SF: Chart1	12	100%	NA
3. . . . . . . SF: Op	8	100%	NA
4. . . . . SF: Mode	4	100%	NA
5. . . . . SF: Vol	4	100%	NA

Details

1. SubSystem block "Chart1"

Child Systems: Chart1

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	13
Decision	NA	100% (24/24) decision outcomes
Execution	NA	NA

2. Chart "Chart1"

Justify or Exclude

Parent: ex4_statecart/Chart1
Child Systems: Op

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	12
Decision	100% (2/2) decision outcomes	100% (24/24) decision outcomes

Decisions analyzed

Substate executed	100%
State "Op"	390/500 U1.1
State "Shut"	110/500 U1.1

Transition "[start == 1]{shut = 0;}" from "Shut" to "Op"

[Justify or Exclude]

Parent: ex4_statecart/Chart1

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

```
1  [start == 1]{shut = 0;}
```

#1: [start == 1]{shut = 0;}

Decisions analyzed

start == 1	100%
false	106/110 U1.1
true	4/110 U1.1

Transition "[stop == 1]{shut = 1; vol1 = 0; vol2 = 0...}" from "Op" to "Shut"

[Justify or Exclude]

Parent: ex4_statecart/Chart1

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

```
1  [stop == 1]{shut = 1; vol1 = 0; vol2 = 0; on = 0; off=0;}
```

#1: [stop == 1]{shut = 1; vol1 = 0; vol2 = 0; on = 0; off=0;}

Decisions analyzed

stop == 1	100%

false	387/390 U1.1
true	3/390 U1.2

Transition "[t_on == 1]{shut = 0; on = 1; off = 0;}" from "Shut" to "On"

Justify or Exclude

Parent: ex4_statecart/Chart1

Metric	**Coverage**
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

1 `[t_on == 1]{shut = 0; on = 1; off = 0;}`

#1: [t_on == 1]{shut = 0; on = 1; off = 0;}

Decisions analyzed

t_on == 1	100%
false	105/106 U1.1
true	1/106 U1.4

3. State "Op"

Justify or Exclude

Parent: ex4_statecart/Chart1
Child Systems: Mode, Vol

Metric	**Coverage (this object)**	**Coverage (inc. descendants)**
Cyclomatic Complexity	0	8
Decision	NA	100% (16/16) decision outcomes

4. State "Mode"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	4
Decision	100% (4/4) decision outcomes	100% (8/8) decision outcomes

Decisions analyzed

Substate executed	100%
State "Off"	178/387 U1.1
State "On"	209/387 U1.1
Substate exited when parent exits	100%
State "Off"	2/3 U1.2
State "On"	1/3 U1.5

Transition "[t_on == 1]{off = 0; on = 1}" from "Off" to "On"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op.Mode

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

1   `[t_on == 1]{off = 0; on = 1}`

#1: [t_on == 1]{off = 0; on = 1}

Decisions analyzed

t_on == 1	100%
false	174/178 U1.1
true	4/178 U1.1

Transition "[t_off == 1]{off = 1; on = 0}" from "On" to "Off"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op.Mode

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

```
1  [t_off == 1]{off = 1; on = 0}
```

#1: [t_off == 1]{off = 1; on = 0}

Decisions analyzed

t_off == 1	100%
false	207/209 U1.1
true	2/209 U1.2

5. State "Vol"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	4
Decision	100% (4/4) decision outcomes	100% (8/8) decision outcomes

Decisions analyzed

Substate executed	100%
State "Vol1"	318/387 U1.1
State "Vol2"	69/387 U1.3
Substate exited when parent exits	100%
State "Vol1"	2/3 U1.2
State "Vol2"	1/3 U1.5

Transition "[inc == 1]{vol1 = 0; vol2 = 1}" from "Vol1" to "Vol2"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op.Vol

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

`1` `[inc == 1]{vol1 = 0; vol2 = 1}`

#1: [inc == 1]{vol1 = 0; vol2 = 1}

Decisions analyzed

inc == 1	100%
false	315/318 U1.1
true	3/318 U1.3

Transition "[dec == 1]{vol1 = 1; vol2 = 0}" from "Vol2" to "Vol1"

Justify or Exclude

Parent: ex4_statecart/Chart1.Op.Vol

Metric	Coverage
Cyclomatic Complexity	1
Decision	100% (2/2) decision outcomes

`1` `[dec == 1]{vol1 = 1; vol2 = 0}`

#1: [dec == 1]{vol1 = 1; vol2 = 0}

Decisions analyzed

dec == 1	100%
false	67/69 U1.3
true	2/69 U1.3