

Coverage Report for final_integration

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Analysis Information

Model Information

Model version	1.66
Author	User
Last saved	Mon Apr 06 01:31:45 2020

Simulation Optimization Options

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

Coverage Options

Analyzed model	final_integration
Logic block short circuiting	off
MCDC mode	masking

Tests

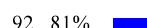
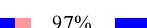
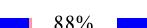
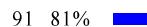
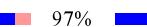
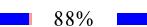
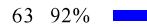
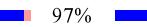
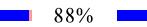
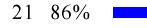
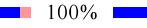
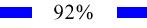
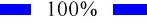
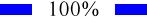
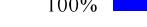
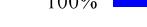
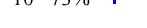
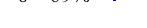
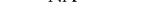
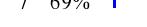
Test# Started execution Ended execution

Test 1 06-Apr-2020 03:00:42 06-Apr-2020 03:00:47

Summary

Model Hierarchy/Complexity

1. [final_integration](#)
2. . . . [PriorityBasedIntegratedmodel](#)
3. . . . [After_unlock_features](#)
4. . . . [airbag_deployment_system_main](#)
5. . . . [Safe_distance_enable](#)
6. . . . [Compare_to_airbag](#)
7. . . . [Compare_to_distance](#)
8. . . . [airbag_decisionsystem](#)
9. . . . [Airbag_Decision](#)
10. . . . [SF:PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Test 1							
	Decision	Condition	MCDC	Execution			
92	81%		97%		88%		100%
91	81%		97%		88%		100%
63	92%		97%		88%		100%
21	86%		100%		92%		100%
1	100%		100%		100%		100%
	NA		100%		NA		100%
	NA		100%		NA		100%
10	73%		NA		NA		100%
8	69%		NA		NA		NA
7	69%		NA		NA		NA

11.....	occupation_detection_system	10	100%		100%		100%		100%	
12.....	Occupant_Detection	10	100%		100%		100%		NA	
13.....	SF: PriorityBasedIntegratedmodel/After_unlock_features /airbag_deployment_system_main/occupation_detection_system/Occupant_Detection	9	100%		100%		100%		NA	
14.....	SF: systemOn	6	100%		100%		100%		NA	
15.....	seatbelt_warning_system	10	94%		NA		NA		NA	
16.....	seat_belt_alert_system	10	94%		NA		NA		NA	
17.....	SF: PriorityBasedIntegratedmodel/After_unlock_features /seatbelt_warning_system/seat_belt_alert_system	9	94%		NA		NA		NA	
18.....	suspension_system	30	95%		93%		86%		100%	
19.....	tyremonitoring	28	95%		93%		86%		NA	
20.....	SF: PriorityBasedIntegratedmodel/After_unlock_features /suspension_system/tyremonitoring	27	95%		93%		86%		NA	
21.....	SF: Ignition_ON	24	94%		93%		86%		NA	
22.....	SF: City_mode	10	92%		93%		86%		NA	
23.....	SF: Highway_mode	10	92%		93%		86%		NA	
24.....	Passive Keyless Entry system	28	60%		NA		NA		100%	
25.....	Door_Status_Scenario1	14	71%		NA		NA		NA	
26.....	SF: PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1	13	71%		NA		NA		NA	
27.....	SF: PassiveENtryScenario1	12	68%		NA		NA		NA	
28.....	SF: Available	10	72%		NA		NA		NA	
29.....	SF: SensorWork	6	80%		NA		NA		NA	
30.....	Door_Status_Scenario2	14	50%		NA		NA		NA	
31.....	SF: PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2	13	50%		NA		NA		NA	
32.....	SF: PassiveEntryScenario2	12	45%		NA		NA		NA	
33.....	SF: Available	10	44%		NA		NA		NA	
34.....	SF: SensorWork	6	30%		NA		NA		NA	

Details

1. Model "final_integration"

Child Systems: [PriorityBasedIntegratedmodel](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	92
Condition	NA	97% (56/58) condition outcomes
Decision	NA	81% (111/137) decision outcomes
MCDC	NA	88% (23/26) conditions reversed the outcome
Execution	NA	100% (18/18) objective outcomes

2. SubSystem block "PriorityBasedIntegratedmodel"

Justify or Exclude

Parent: [/final_integration](#)

Child Systems: [After_unlock_features](#), [Passive Keyless Entry system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	91
Condition	NA	97% (56/58) condition outcomes
Decision	NA	81% (111/137) decision outcomes

88% (23/26) conditions reversed the outcome

MCDC	NA	
Execution	NA	100% (18/18) objective outcomes

3. SubSystem block "[After_unlock_features](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel](#)

Child Systems: [airbag_deployment_system_main](#), [seatbelt_warning_system](#), [suspension_system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	63
Condition	NA	97% (56/58) condition outcomes
Decision	100% (2/2) decision outcomes	92% (82/89) decision outcomes
MCDC	NA	88% (23/26) conditions reversed the outcome
Execution	NA	100% (17/17) objective outcomes

Decisions analyzed

enable logical value	100%
false	2/1001
true	999/1001

Full Coverage

Model Object

Logic block "[NOT](#)"

Metric

Condition, Execution

4. SubSystem block "[airbag_deployment_system_main](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features](#)

Child Systems: [Safe_distance_enable](#), [airbag_decisionsystem](#), [occupation_detection_system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	21
Condition	NA	100% (28/28) condition outcomes
Decision	NA	86% (25/29) decision outcomes
MCDC	NA	92% (11/12) conditions reversed the outcome
Execution	NA	100% (15/15) objective outcomes

Logic block "[AND](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features /airbag_deployment_system_main](#)

Uncovered Links: 

Metric	Coverage
Cyclomatic Complexity	0
Condition	100% (4/4) condition outcomes
MCDC	50% (1/2) conditions reversed the outcome
Execution	100% (1/1) objective outcomes

MC/DC analysis (combinations in parentheses did not occur)

Decision/Condition	True Out	False Out
expression for output		
input port 1	TT	FT
input port 2	TT	(TF)

5. SubSystem block "[Safe_distance_enable](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features /airbag_deployment_system_main](#)

Child Systems: [Compare_to_airbag](#), [Compare_to_distance](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	1
Condition	NA	100% (8/8) condition outcomes
Decision	NA	100% (2/2) decision outcomes
MCDC	NA	100% (2/2) conditions reversed the outcome
Execution	NA	100% (7/7) objective outcomes

Full Coverage

Model Object

Model Object	Metric
Logic block " Logical Operator "	Condition, MCDC, Execution
Switch block " Switch "	Decision, Execution
DataTypeConversion block " Cast To Boolean "	Execution
Constant block " Disabled "	Execution
Constant block " Enabled "	Execution

6. SubSystem block "[Compare_to_airbag](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features /airbag_deployment_system_main/Safe_distance_enable](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Condition	NA	100% (2/2) condition outcomes
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object

Model Object	Metric
RelationalOperator block " Compare "	Condition, Execution

7. SubSystem block "[Compare_to_distance](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/Safe_distance_enable](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	0
Condition	NA	100% (2/2) condition outcomes
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object

RelationalOperator block "[Compare](#)"

Metric

Condition, Execution

8. SubSystem block "[airbag_decisionsystem](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main](#)

Child Systems: [Airbag_Detection](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	10
Decision	100% (2/2) decision outcomes	73% (11/15) decision outcomes
Execution	NA	100% (3/3) objective outcomes

Decisions analyzed

enable logical value	100%
false	592/999
true	407/999

Full Coverage

Model Object

DiscreteIntegrator block "[acceleration_integrator](#)"

Metric

Execution

Sum block "[Add](#)"

Execution

Constant block "[initial_vol](#)"

Execution

9. SubSystem block "[Airbag_Detection](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem](#)

Child Systems: [PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Detection](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	8

Decision NA 69% (9/13) decision outcomes

10. Chart "[PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Metric **Coverage (this object)** **Coverage (inc. descendants)**

Cyclomatic Complexity	2	7
Decision	100% (3/3) decision outcomes	69% (9/13) decision outcomes

Decisions analyzed

Substate executed	100%
State "fireState"	403/406
State "normalState"	1/406
State "standbyState"	2/406

Transition "[[vehicle.vol>=Vth](#)]" from "[normalState](#)" to "[standbyState](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Uncovered Links:

Metric **Coverage**

Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

[1 \[vehicle.vol>=vth\]](#)

[#1: \[vehicle.vol>=Vth\]](#)

Decisions analyzed

vehicle.vol>=Vth	50%
false	0/1
true	1/1

Transition "[[vehicle.vol<Vth](#)]" from "[standbyState](#)" to "[normalState](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Uncovered Links:

Metric **Coverage**

Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

[1 \[vehicle.vol<vth\]](#)

#1: [vehicle_vol<Vth]

Decisions analyzed

vehicle_vol<Vth	50%
false	2/2
true	0/2 

Transition "[vehicle_speed>=22.54]" from "standbyState" to "fireState"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Uncovered Links: 

Metric Coverage

Cyclomatic Complexity 1
Decision 50% (1/2) decision outcomes

[1 \[vehicle_speed>=22.54\]](#)

#1: [vehicle_speed>=22.54]

Decisions analyzed

vehicle_speed>=22.54	50%
false	2/2
true	0/2 

Transition "[12.88<vehicle_speed<22.54]" from "standbyState" to "fireState"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/airbag_decisionsystem/Airbag_Decision](#)

Uncovered Links: 

Metric Coverage

Cyclomatic Complexity 1
Decision 50% (1/2) decision outcomes

[1 \[12.88<vehicle_speed<22.54\]](#)

#1: [12.88<vehicle_speed<22.54]

Decisions analyzed

12.88<vehicle_speed<22.54	50%
false	0/2 
true	2/2

Full Coverage

Model Object	Metric
Transition "[vehicle_speed<=12.88]" from "fireState" to "standbyState"	Decision

11. SubSystem block "occupation_detection_system"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main](#)
Child Systems: [Occupant_Detection](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	10
Condition	NA	100% (16/16) condition outcomes
Decision	NA	100% (12/12) decision outcomes
MCDC	NA	100% (8/8) conditions reversed the outcome
Execution	NA	100% (4/4) objective outcomes

Full Coverage

Model Object	Metric
Logic block " Logical Operator "	Condition, MCDC, Execution
DataTypeConversion block " Cast To Boolean "	Execution
DataTypeConversion block " Cast To Boolean1 "	Execution
DataTypeConversion block " Cast To Boolean2 "	Execution

12. SubSystem block "Occupant_Detection"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/occupation_detection_system](#)
Child Systems: [PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/occupation_detection_system/Occupant_Detection](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	10
Condition	NA	100% (12/12) condition outcomes
Decision	NA	100% (12/12) decision outcomes
MCDC	NA	100% (6/6) conditions reversed the outcome

13. Chart "PriorityBasedIntegratedmodel/After_unlock..."

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/airbag_deployment_system_main/occupation_detection_system/Occupant_Detection](#)
Child Systems: [systemOn](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	9

Condition	NA	100% (12/12) condition outcomes
Decision	100% (2/2) decision outcomes	100% (12/12) decision outcomes
MCDC	NA	100% (6/6) conditions reversed the outcome

Decisions analyzed

Substate executed	100%
State "systemOff"	638/998
State "systemOn"	360/998

Full Coverage

Model Object	Metric
Transition "[ig_sb==1.0]" from "systemOn" to "systemOff"	Decision
Transition "[ig_sb==0]" from "systemOff" to "systemOn"	Decision

14. State "systemOn"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features](#)
[/airbag_deployment_system_main/occupant_detection_system/Occupant_Detection](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	6
Condition	NA	100% (12/12) condition outcomes
Decision	NA	100% (6/6) decision outcomes
MCDC	NA	100% (6/6) conditions reversed the outcome

Full Coverage

Model Object	Metric
Transition "[wt>=75.0 && wt<=100.0]" from Junction #0 to Junction #1	Condition, Decision, MCDC
Transition "[wt>=50.0 && wt<=75.0]" from Junction #2 to Junction #3	Condition, Decision, MCDC
Transition "[wt>=25.0 && wt<=50.0]" from Junction #4 to Junction #5	Condition, Decision, MCDC

15. SubSystem block "seatbelt warning system"

Justify or Exclude

Parent: final_integration/PriorityBasedIntegratedmodel/After_unlock_features

Child Systems: [seat_belt_alert_system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	10
Decision	NA	94% (15/16) decision outcomes

16. SubSystem block "seat_belt_alert_system"

Justify or Exclude

final_integration/PriorityBasedIntegratedmodel/After_unlock_features /seatbelt_warning_system

Parent:

Child Systems: [PriorityBasedIntegratedmodel/After_unlock_features/seatbelt_warning_system/seat_belt_alert_system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	10
Decision	NA	94% (15/16) decision outcomes

17. Chart "[PriorityBasedIntegratedmodel/After_unlock_features/seatbelt_warning_system/seat_belt_alert_system](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/seatbelt_warning_system/seat_belt_alert_system](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	3	9
Decision	100% (4/4) decision outcomes	94% (15/16) decision outcomes

Decisions analyzed

Substate executed	100%
State "Buzzer"	97/998
State "Idle_state"	263/998
State "SeatbeltOn"	607/998
State "Seatoccupied"	31/998

Transition "[\[seatoccupied==0\]](#)" from "[Buzzer](#)" to "[Idle_state](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/seatbelt_warning_system/seat_belt_alert_system](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

[1 \[seatoccupied==0\]](#)

[#1: \[seatoccupied==0\]](#)

Decisions analyzed

seatoccupied==0	50%
false	97/97
true	0/97

Full Coverage

Model Object **Metric**

Transition "[\[seatoccupied==1\]](#)" from "[Idle_state](#)" to "[Seatoccupied](#)" Decision

Transition "[seatbelt==1]" from "Seatoccupied" to "SeatbeltOn"	Decision
Transition "[seatbelt==0]" from "Seatoccupied" to "Buzzer"	Decision
Transition "[seatbelt==1]" from "Buzzer" to "SeatbeltOn"	Decision
Transition "[seatoccupied==0]" from "SeatbeltOn" to "Idle_state"	Decision

18. SubSystem block "[suspension_system](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features](#)
Child Systems: [tyremonitoring](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	30
Condition	NA	93% (26/28) condition outcomes
Decision	NA	95% (40/42) decision outcomes
MCDC	NA	86% (12/14) conditions reversed the outcome
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Saturate block " lim0_100 "	Decision, Execution

19. SubSystem block "[tyremonitoring](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system](#)
Child Systems: [PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	28
Condition	NA	93% (26/28) condition outcomes
Decision	NA	95% (36/38) decision outcomes
MCDC	NA	86% (12/14) conditions reversed the outcome

20. Chart "[PriorityBasedIntegratedmodel/After_unloc...](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring](#)
Child Systems: [Ignition_ON](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	27
Condition	NA	93% (26/28) condition outcomes
Decision	100% (2/2) decision outcomes	95% (36/38) decision outcomes
MCDC	NA	86% (12/14) conditions reversed the outcome

Decisions analyzed

Substate executed	100%
State "Ignition_OFF"	263/998

State "Ignition_ON"	735/998
---------------------	---------

Full Coverage

Model Object	Metric
Transition "[Igni_ip==1]" from " Ignition_OFF " to " Ignition_ON "	Decision
Transition "[Igni_ip==0]" from " Ignition_ON " to " Ignition_OFF "	Decision

21. State "[Ignition_ON](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features /suspension_system/tyremonitoring](#)
Child Systems: [City_mode](#), [Highway_mode](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	24
Condition	NA	93% (26/28) condition outcomes
Decision	100% (4/4) decision outcomes	94% (30/32) decision outcomes
MCDC	NA	86% (12/14) conditions reversed the outcome

Decisions analyzed

Substate executed	100%
State "City_mode"	312/723
State "Highway_mode"	411/723
Substate exited when parent exits	100%
State "City_mode"	5/12
State "Highway_mode"	7/12

Full Coverage

Model Object	Metric
Transition "[M_status==1]" from " City_mode " to " Highway_mode "	Decision
Transition "[M_status==0]" from " Highway_mode " to " City_mode "	Decision

22. State "[City_mode](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features /suspension_system/tyremonitoring.Ignition_ON](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	10
Condition	NA	93% (13/14) condition outcomes
Decision	NA	92% (11/12) decision outcomes
MCDC	NA	86% (6/7) conditions reversed the outcome

Transition "[IP_press==50]" from Junction #0 to Junction #2

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring.Ignition_ON.City_mode](#)

Uncovered Links:

Metric Coverage

Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

1 [IP_press==50]

#1: [IP_press==50]

Decisions analyzed

IP_press==50	50%
false	0/81
true	81/81

Transition "[IP_press==50 && Acc_ip <30]" from Junction #23 to Junction #7

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring.Ignition_ON.City_mode](#)

Uncovered Links:

Metric Coverage

Cyclomatic Complexity	2
Condition	75% (3/4) condition outcomes
Decision	100% (2/2) decision outcomes
MCDC	50% (1/2) conditions reversed the outcome

1 [IP_press==50 && Acc_ip <30]

#1: [IP_press==50 && Acc_ip <30]

Decisions analyzed

IP_press==50 && Acc_ip <30	100%
false	218/227
true	9/227

Conditions analyzed

Description	True	False
IP_press==50	9	218
Acc_ip <30	9	0

MC/DC analysis (combinations in parentheses did not occur)

Decision/Condition	True Out	False Out

IP_press==50 && Acc_ip <30		
IP_press==50	TT	Fx
Acc_ip <30	TT	(TF)

Full Coverage

Model Object

Transition "[\[IP_press==50 && Acc_ip >30&&Acc_ip<60\]](#)" from Junction #22 to Junction #3

Transition "[\[IP_press==50 && Acc_ip>60\]](#)" from Junction #2 to Junction #5

Transition "[\[IP_press<50\]](#)" from Junction #0 to Junction #18

Transition "[\[IP_press>50\]](#)" from Junction #0 to Junction #20

Metric

Condition, Decision, MCDC

Condition, Decision, MCDC

Decision

Decision

23. State "[Highway mode](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring.Ignition_ON](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	10
Condition	NA	93% (13/14) condition outcomes
Decision	NA	92% (11/12) decision outcomes
MCDC	NA	86% (6/7) conditions reversed the outcome

Transition "[\[IP_press==100\]](#)" from Junction #17 to Junction #15

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/After_unlock_features/suspension_system/tyremonitoring.Ignition_ON.Highway_mode](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

[1 \[IP_press==100\]](#)

[#1: \[IP_press==100\]](#)

Decisions analyzed

IP_press==100	50%
false	0/51
true	51/51

Transition "[IP_press==100 && Acc_ip<30]" from Junction #31 to Junction #12

Justify or Exclude

Parent: final_integration/PriorityBasedIntegratedmodel/After_unlock_features/
/suspension_system/tyremonitoring/Ignition_ON.Highway_mode
Uncovered Links: 

Metric	Coverage
Cyclomatic Complexity	2
Condition	75% (3/4) condition outcomes
Decision	100% (2/2) decision outcomes
MCDC	50% (1/2) conditions reversed the outcome

1 [IP_press==100 && Acc_ip<30]

#1: [IP_press==100 && Acc_ip<30]

Decisions analyzed

IP_press==100 && Acc_ip<30	100%
false	354/365
true	11/365

Conditions analyzed

Description	True	False
IP_press==100	11	354
Acc_ip<30	11	0  

MC/DC analysis (combinations in parentheses did not occur)

Decision/Condition	True Out	False Out
IP_press==100 && Acc_ip<30		
IP_press==100	TT	Fx
Acc_ip<30	TT	(TF)

Full Coverage

Model Object

Transition "[IP_press==100 && Acc_ip>30&&Acc_ip<60]" from Junction #30 to Junction #10

Transition "[IP_press==100 && Acc_ip>60]" from Junction #15 to Junction #13

Transition "[IP_press<100]" from Junction #17 to Junction #26

Transition "[IP_press>100]" from Junction #17 to Junction #27

Metric

Condition, Decision, MCDC

Condition, Decision, MCDC

Decision

Decision

24. SubSystem block "Passive Keyless Entry system"

Justify or Exclude

Parent: final_integration/PriorityBasedIntegratedmodel

Child Systems: [Door_Status_Scenario1](#), [Door_Status_Scenario2](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	28
Decision	NA	60% (29/48) decision outcomes
Execution	NA	100% (1/1) objective outcomes

Full Coverage

Model Object	Metric
Constant block " SignalScanInput "	Execution

25. SubSystem block "[Door_Status_Scenario1](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system](#)

Child Systems: [PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	14
Decision	NA	71% (17/24) decision outcomes

26. Chart "[PriorityBasedIntegratedmodel/Passive Key...](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1](#)

Child Systems: [PassiveENtryScenario1](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	1	13
Decision	100% (2/2) decision outcomes	71% (17/24) decision outcomes

Decisions analyzed

Substate executed	100%
State "Available"	999/1000
State "ScanOff"	1/1000

27. Box "[PassiveENtryScenario1](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1](#)

Child Systems: [Available](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	12
Decision	NA	68% (15/22) decision outcomes

Transition "[\[SignalScanInput==1\]{disp\('Signal Availa...'\)}](#)" from "[ScanOff](#)" to "[Available](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1.PassiveENtryScenario1](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

```
1 [SignalScanInput==1]{disp('Signal Available');
2 disp('-----');}
```

#1: [SignalScanInput==1]{disp('Signal Available');

Decisions analyzed

SignalScanInput==1	50%
false	0/1
true	1/1

Transition "[SignalScanInput==0]" from "[Available](#)" to "[ScanOff](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1.PassiveENtryScenario1](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

```
1 [SignalScanInput==0]
```

#1: [SignalScanInput==0]

Decisions analyzed

SignalScanInput==0	50%
false	999/999
true	0/999

28. State "[Available](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1.PassiveENtryScenario1](#)

Child Systems: [SensorWork](#)

Uncovered Links:

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	10
Decision	50% (2/4) decision outcomes	72% (13/18) decision outcomes

Decisions analyzed

Substate executed	100%
State "SensorWork"	997/999
State "Signal"	2/999
Substate exited when parent exits	0%
State "SensorWork"	-- ----
State "Signal"	-- ----

Transition "[[Input_signal_S1>0](#)]{disp('Connection of ...')}" from "[Signal](#)" to "[SensorWork](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1.PassiveENtryScenario1.Available](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

```
1 [Input_signal_S1>0]{disp('Connection of the signal');}
2 disp('-----');
```

[#1: \[Input_signal_S1>0\]{disp\('Connection of the signal'\);](#)

Decisions analyzed

Input_signal_S1>0	50%
false	0/2 ----
true	2/2

Full Coverage

Model Object

Metric

Transition "[[Input_signal_S1==900](#)]" from "[SensorWork](#)" to "[Signal](#)" Decision

29. State "[SensorWork](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario1.PassiveENtryScenario1.Available](#)

Uncovered Links:

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	4	6
Decision	67% (4/6) decision outcomes	80% (8/10) decision outcomes

Decisions analyzed

Substate executed	100%
-------------------	------

State "DoorSensor"	189/996
State "OutofRange"	156/996
State "VehicleSensor"	651/996
Substate exited when parent exits	33%
State "DoorSensor"	1/1
State "OutofRange"	0/1
State "VehicleSensor"	0/1

Full Coverage

Model Object

Transition "[count > proximity] {disp('User moving o...') from "[DoorSensor](#)" to "[VehicleSensor](#)"

Metric

Decision

Transition "[count > proximity] {disp('User moving o...') from "[VehicleSensor](#)" to "[OutofRange](#)"

Decision

30. SubSystem block "[Door_Status_Scenario2](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system](#)

Child Systems: [PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2](#)

Metric

Cyclomatic Complexity

Coverage (this object)

1

Coverage (inc. descendants)

14

Decision

NA

50% (12/24) decision outcomes

31. Chart "[PriorityBasedIntegratedmodel/Passive Key...](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2](#)

Child Systems: [PassiveEntryScenario2](#)

Metric

Cyclomatic Complexity

Coverage (this object)

1

Coverage (inc. descendants)

13

Decision

100% (2/2) decision outcomes

50% (12/24) decision outcomes

Decisions analyzed

Substate executed	100%
State "Available"	999/1000
State "ScanOff"	1/1000

32. Box "[PassiveEntryScenario2](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2](#)

Child Systems: [Available](#)

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	0	12
Decision	NA	45% (10/22) decision outcomes

Transition "[\[SignalScanInput==1\]{disp\('Signal Available'\)}](#)" from "[ScanOff](#)" to "[Available](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

```
1 [SignalScanInput==1]{disp('Signal Available');  
2 disp('-----');}
```

#1: [\[SignalScanInput==1\]{disp\('Signal Available'\)}](#):

Decisions analyzed

SignalScanInput==1	50%
false	0/1
true	1/1

Transition "[\[SignalScanInput==0\]](#)" from "[Available](#)" to "[ScanOff](#)"

[Justify or Exclude](#)

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

```
1 [SignalScanInput==0]
```

#1: [\[SignalScanInput==0\]](#)

Decisions analyzed

SignalScanInput==0	50%
false	999/999
true	0/999

33. State "[Available](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2](#)

Child Systems: [SensorWork](#)

Uncovered Links:

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	2	10
Decision	50% (2/4) decision outcomes	44% (8/18) decision outcomes

Decisions analyzed

Substate executed	100%
State "SensorWork"	548/999
State "Signal"	451/999
Substate exited when parent exits	0%
State "SensorWork"	--
State "Signal"	--

Transition "[\[Input_Signal_S2 < 1000\] {disp\('Connecti...'\)}](#)" from "["Signal"](#)" to "["SensorWork"](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2.Available](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

1 [\[Input_Signal_S2 < 1000\] \(disp\('Connection of the signal'\);](#)
2 [disp\('-----'\)\);](#)

#1: [\[Input_Signal_S2 < 1000\] {disp\('Connection of the signal'\);](#)

Decisions analyzed

Input_Signal_S2 < 1000	50%
false	0/451
true	451/451

Full Coverage

Model Object **Metric**

Transition "[\[Input_Signal_S2==0\]](#)" from "["SensorWork"](#)" to "["Signal"](#)" Decision

34. State "["SensorWork"](#)"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2.Available](#)

Uncovered Links:

Metric	Coverage (this object)	Coverage (inc. descendants)
Cyclomatic Complexity	4	6
Decision	33% (2/6) decision outcomes	30% (3/10) decision outcomes

Decisions analyzed

Substate executed	33%
State "DoorSensor"	0/97
State "OutofRange"	97/97
State "VehicleSensor"	0/97
Substate exited when parent exits	33%
State "DoorSensor"	0/451
State "OutofRange"	451/451
State "VehicleSensor"	0/451

Transition "[count==749] {disp('User moving towards ...') from "OutofRange" to "VehicleSensor"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2.Available.SensorWork](#)

Uncovered Links:

Metric	Coverage
Cyclomatic Complexity	1
Decision	50% (1/2) decision outcomes

1 [count==749] {disp('User moving towards Vehicle Proximity');}

#1: [count==749] {disp('User moving towards Vehicle Proximity');}

Decisions analyzed

count==749	50%
false	97/97
true	0/97

Transition "[count==99] {disp('User moving towards D...') from "VehicleSensor" to "DoorSensor"

Justify or Exclude

Parent: [final_integration/PriorityBasedIntegratedmodel/Passive Keyless Entry system/Door_Status_Scenario2.PassiveEntryScenario2.Available.SensorWork](#)

Uncovered Links:

Metric	Coverage

Cyclomatic Complexity 1
Decision 0% (0/2) decision outcomes

```
1 [count==99] disp('User moving towards Door Proximity');
2 disp('-----');
```

[**#1: \[count==99\] {disp\('User moving towards Door Proximity'\)}**](#)

Decisions analyzed

count==99	0%
false	--
true	--