Report

Problem 1:

1. Promela code can be found in problem1.pml
2. The sequence logs for the specified trace are shown in 1B.txt and msc.ps and can be replicated by opening problem1.pml in ispin and clicking on (Re)Run in the Simulate/Replay tab with the random seed set to 123 (default). The description for this trace is as follows:
3. Steps 0-20: System is initializing. In this step, the conditions given in the problem statements with regards to the 4 shuttles and the 2 orders are input into the system.
4. Steps 21-29: The Shuttle Management System sends order 0 to Shuttle 0.
5. Steps 30-33: Shuttle 0 begins processing the offer for the newly received order 0
6. Steps 34-36: The Shuttle Management System sends order 0 to Shuttle 1.
7. Steps 37-50: The Shuttle Management System sends order 0 to Shuttle 2.
8. Steps 51-56: Shuttle 2 begins processing the offer for the newly received order 0
9. Steps 57-59: Shuttle 1 begins processing the offer for the newly received order 0
10. Steps 60-61: The Shuttle Management System sends order 0 to Shuttle 3.
11. Steps 62-70: Shuttle 0 calculates the start destination of order 0 to be 0 stations away from its current position
12. Steps 71-75: Shuttle 3 begins processing the offer for the newly received order 0
13. Steps 80-100: The Shuttle Management System waits for an offer for order 0 from Shuttle 0
14. Steps 101-107: Shuttle 1 calculates the start destination of order 0 to be 0 stations away from its current position
15. Steps 111-115: Shuttle 2 calculates the start destination of order 0 to be 1 stations away from its current position
16. Steps 120-127: Shuttle 0 sends an offer to the management system with an acceptance
17. Steps 128-130: Shuttle 3 calculates the start destination of order 0 to be 2 stations away from its current position
18. Steps 131-132: Shuttle 1 sends an offer to the management system with a rejection
19. Steps 135-144: Shuttle 2 sends an offer to the management system with an acceptance
20. Steps 145-152: Shuttle 3 sends an offer to the management system with a rejection
21. Steps 153-156: The Shuttle Management System waits for an offer for order 0 from Shuttle 1
22. Steps 157-168: The Shuttle Management System waits for an offer for order 0 from Shuttle 2
23. Steps 169-178: The Shuttle Management System waits for an offer for order 0 from Shuttle 3
24. Steps 179-188: The Shuttle Management System accepts Shuttle 2’s offer and assigns order 0 to Shuttle 2
25. Steps 255-265: The Shuttle Management System sends order 1 to Shuttle 0.
26. Steps 266-271: The Shuttle Management System sends order 1 to Shuttle 1.
27. Steps 272-275: Shuttle 0 begins processing the offer for the newly received order 1.
28. Steps 276-284: Shuttle 1 begins processing the offer for the newly received order 1.
29. Steps 285-289: The Shuttle Management System sends order 1 to Shuttle 2.
30. Steps 290-293: Shuttle 2 requests access from the Railway Network to travel from station 2 to station 1
31. Steps 294-310: The Shuttle Management System sends order 1 to Shuttle 3.
32. Steps 311-320: Shuttle 3 begins processing the offer for the newly received order 1.
33. Steps 321-328: Shuttle 0 calculates the start destination of order 1 to be 1 stations away from its current position
34. Steps 330-339: The Railway Network grants access for Shuttle 2 to travel from station 2 to station 1
35. Steps 340-349: The Shuttle Management System waits for an offer for order 1 from Shuttle 0
36. Steps 350-354: Shuttle 0 sends an offer to the management system with an acceptance
37. Steps 355-355: Shuttle 1 calculates the start destination of order 1 to be 1 stations away from its current position
38. Steps 357-364: Shuttle 2 travels from Station 2 to Station 1
39. Steps 365-381: Shuttle 1 sends an offer to the management system with an acceptance
40. Steps 382-392: Shuttle 2 begins processing the offer for the newly received order 1.
41. Steps 393-393: Shuttle 3 calculates the start destination of order 1 to be 1 stations away from its current position
42. Steps 396-403: The Shuttle Management System waits for an offer for order 1 from Shuttle 1
43. Steps 404-408: Shuttle 3 sends an offer to the management system with an acceptance
44. Steps 409-428: The Shuttle Management System waits for an offer for order 1 from Shuttle 2
45. Steps 429-430: Shuttle 2 calculates the start destination of order 1 to be 1 stations away from its current position
46. Steps 432-438: Shuttle 2 sends an offer to the management system with an acceptance
47. Steps 439-448: The Shuttle Management System waits for an offer for order 1 from Shuttle 3
48. Steps 449-458: The Shuttle Management System accepts Shuttle 2’s offer and assigns order 1 to Shuttle 2
49. Steps 498-510: Shuttle 2 loads 4 people at station 1
50. Steps 526-541: Shuttle 2 requests access from the Railway Network to travel from station 1 to station 2
51. Steps 542-550: The Railway Network grants access for Shuttle 2 to travel from station 1 to station 2
52. Steps 551-558: Shuttle 2 travels from station 1 to station 2
53. Steps 559-578: Shuttle 2 requests access from the Railway Network to travel from station 2 to station 3
54. Steps 579-587: The Railway Network grants access for Shuttle 2 to travel from station 2 to station 3
55. Steps 588-595: Shuttle 2 travels from station 2 to station 3
56. Steps 596-606: Shuttle 2 unloads 4 people at station 2. Order 0 is complete
57. Steps 607-616:
58. Steps 617-619:
59. Steps 620-633: Shuttle 2 requests access from the Railway Network to travel from station 3 to station 2
60. Steps 634-642: The Railway Network grants access for Shuttle 2 to travel from station 2 to station 3
61. Steps 643-650:
62. Steps 651-661:
63. Steps 662-667:
64. Steps 668-682:
65. Steps 683-691:
66. Steps 692-699:
67. Steps 700-710:
68. The predicate moving(S) is true if and only if shuttle S is not currently on a track (i.e. the shuttle is currently stationed.

The predicate noLoad(S) is true if and only if shuttle S has no load (i.e. not carrying any people).

We define the following LTL property: ∀S GF(!moving(S) ∧ noLoad(S))

1. Can you find any additional problems in the system, by verifying other properties? Please state what property you verified and give a clear explanation of any errors you found.

Problem 2:

1. Promela code can be found in problem2.pml
2. Lorem ipsum dolor si amet
3. Can you find any additional problems in the protocol? Please state what property you verified and give clear explanation of any errors you found

0: proc - (:root:) creates proc 0 (:init:)

Starting Shuttle with pid 1

1: proc 0 (:init::1) creates proc 1 (Shuttle)

1: proc 0 (:init::1) problem1.pml:207 (state 1) [(run Shuttle(4,2,1,0))]

Starting Shuttle with pid 2

2: proc 0 (:init::1) creates proc 2 (Shuttle)

2: proc 0 (:init::1) problem1.pml:208 (state 2) [(run Shuttle(2,4,1,1))]

Starting Shuttle with pid 3

3: proc 0 (:init::1) creates proc 3 (Shuttle)

3: proc 0 (:init::1) problem1.pml:209 (state 3) [(run Shuttle(5,1,2,2))]

Starting Shuttle with pid 4

4: proc 0 (:init::1) creates proc 4 (Shuttle)

4: proc 0 (:init::1) problem1.pml:210 (state 4) [(run Shuttle(3,3,3,3))]

5: proc 0 (:init::1) problem1.pml:211 (state 5) []

6: proc 0 (:init::1) problem1.pml:211 (state 6) [first.size = 4]

7: proc 0 (:init::1) problem1.pml:211 (state 7) [first.start = 1]

8: proc 0 (:init::1) problem1.pml:211 (state 8) [first.end = 3]

9: proc 0 (:init::1) problem1.pml:212 (state 9) []

10: proc 0 (:init::1) problem1.pml:212 (state 10) [second.size = 2]

11: proc 0 (:init::1) problem1.pml:212 (state 11) [second.start = 2]

12: proc 0 (:init::1) problem1.pml:212 (state 12) [second.end = 3]

Starting ShuttleManagementSystem with pid 5

13: proc 0 (:init::1) creates proc 5 (ShuttleManagementSystem)

13: proc 0 (:init::1) problem1.pml:213 (state 13) [(run ShuttleManagementSystem(first.start,first.end,first.size,second.start,second.end,second.size))]

Starting RailwayNetwork with pid 6

14: proc 0 (:init::1) creates proc 6 (RailwayNetwork)

14: proc 0 (:init::1) problem1.pml:214 (state 14) [(run RailwayNetwork())]

15: proc 5 (ShuttleManagementSystem:1) problem1.pml:38 (state 1) [orders[0].start = first.start]

16: proc 5 (ShuttleManagementSystem:1) problem1.pml:38 (state 2) [orders[0].end = first.end]

17: proc 5 (ShuttleManagementSystem:1) problem1.pml:38 (state 3) [orders[0].size = first.size]

18: proc 5 (ShuttleManagementSystem:1) problem1.pml:39 (state 4) [orders[1].start = second.start]

19: proc 5 (ShuttleManagementSystem:1) problem1.pml:39 (state 5) [orders[1].end = second.end]

20: proc 5 (ShuttleManagementSystem:1) problem1.pml:39 (state 6) [orders[1].size = second.size]

21: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 7) [i = 0]

22: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 8) [i = 0]

24: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 9) [((i<=(2-1)))]

25: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 10) [j = 0]

26: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 11) [j = 0]

28: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

Shuttle Management System: sending order 0 to shuttle 0

29: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

30: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

31: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

32: proc 1 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

Shuttle 0: processing offer for newly received order

33: proc 1 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

35: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

Shuttle Management System: sending order 0 to shuttle 1

36: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

37: proc 1 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

38: proc 1 (Shuttle:1) problem1.pml:88 (state 6) [else]

39: proc 1 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

41: proc 1 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

42: proc 1 (Shuttle:1) problem1.pml:93 (state 13) [else]

43: proc 1 (Shuttle:1) problem1.pml:93 (state 14) [distance = (order.start-currentPosition)]

44: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

46: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

48: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

49: proc 1 (Shuttle:1) problem1.pml:97 (state 19) [else]

Shuttle Management System: sending order 0 to shuttle 2

50: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

51: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

52: proc 2 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

53: proc 3 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

54: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

55: proc 1 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

Shuttle 2: processing offer for newly received order 56: proc 3 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

58: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

Shuttle 1: processing offer for newly received order 59: proc 2 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

60: proc 2 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

Shuttle Management System: sending order 0 to shuttle 3

61: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

62: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

63: proc 2 (Shuttle:1) problem1.pml:88 (state 6) [else]

64: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

65: proc 2 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

67: proc 3 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

69: proc 4 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

Shuttle 0: start destination of the order is 0 station(s) away from its current position

70: proc 1 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

71: proc 3 (Shuttle:1) problem1.pml:88 (state 6) [else]

72: proc 5 (ShuttleManagementSystem:1) problem1.pml:46 (state 16) [else]

73: proc 3 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

Shuttle 3: processing offer for newly received order 75: proc 4 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

77: proc 3 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

78: proc 5 (ShuttleManagementSystem:1) problem1.pml:48 (state 21) [minCharge = 2147483647]

Shuttle 0: current load is 0, order size is 4, capacity is 4, 79: proc 1 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

80: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 22) [assignedId = 0]

81: proc 4 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

82: proc 3 (Shuttle:1) problem1.pml:92 (state 11) [((currentPosition>order.start))]

83: proc 4 (Shuttle:1) problem1.pml:88 (state 6) [else]

84: proc 4 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

86: proc 1 (Shuttle:1) problem1.pml:102 (state 25) []

87: proc 2 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

88: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 23) [j = 0]

90: proc 2 (Shuttle:1) problem1.pml:93 (state 13) [else]

91: proc 2 (Shuttle:1) problem1.pml:93 (state 14) [distance = (order.start-currentPosition)]

94: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

95: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

96: proc 4 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

97: proc 2 (Shuttle:1) problem1.pml:97 (state 19) [else]

98: proc 2 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

99: proc 1 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

Shuttle Management System: receiving offer for order 0 from shuttle 0

100: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

101: proc 1 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

103: proc 3 (Shuttle:1) problem1.pml:92 (state 12) [distance = (currentPosition-order.start)]

105: proc 3 (Shuttle:1) problem1.pml:97 (state 19) [else]

106: proc 4 (Shuttle:1) problem1.pml:92 (state 11) [((currentPosition>order.start))]

Shuttle 1: start destination of the order is 0 station(s) away from its current position107: proc 2 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

108: proc 3 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

109: proc 4 (Shuttle:1) problem1.pml:92 (state 12) [distance = (currentPosition-order.start)]

Shuttle 1: current load is 0, order size is 4, capacity is 2, 110: proc 2 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

113: proc 2 (Shuttle:1) problem1.pml:102 (state 25) []

114: proc 2 (Shuttle:1) problem1.pml:106 (state 31) [else]

Shuttle 2: start destination of the order is 1 station(s) away from its current position115: proc 3 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

116: proc 1 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

117: proc 1 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

118: proc 2 (Shuttle:1) problem1.pml:107 (state 32) [offer.id = id]

Shuttle 2: current load is 0, order size is 4, capacity is 5, 119: proc 3 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

120: proc 4 (Shuttle:1) problem1.pml:97 (state 19) [else]

121: proc 4 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

122: proc 2 (Shuttle:1) problem1.pml:107 (state 33) [offer.charge = charge]

124: proc 3 (Shuttle:1) problem1.pml:102 (state 25) []

125: proc 3 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

126: proc 3 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

Shuttle 0: order accepted127: proc 1 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

129: proc 2 (Shuttle:1) problem1.pml:107 (state 34) [offer.refuse = 1]

Shuttle 3: start destination of the order is 2 station(s) away from its current position130: proc 4 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

131: proc 1 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

Shuttle 1: order refused132: proc 2 (Shuttle:1) problem1.pml:108 (state 35) [printf('Shuttle %d: order refused',id)]

133: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

Shuttle 3: current load is 0, order size is 4, capacity is 3, 134: proc 4 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

135: proc 3 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

137: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 28) [(((offer.charge<minCharge)&&!(offer.refuse)))]

138: proc 4 (Shuttle:1) problem1.pml:102 (state 25) []

139: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 29) [minCharge = offer.charge]

140: proc 3 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

141: proc 4 (Shuttle:1) problem1.pml:106 (state 31) [else]

142: proc 4 (Shuttle:1) problem1.pml:107 (state 32) [offer.id = id]

143: proc 2 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

Shuttle 2: order accepted144: proc 3 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

146: proc 4 (Shuttle:1) problem1.pml:107 (state 33) [offer.charge = charge]

147: proc 3 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

148: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 30) [assignedId = offer.id]

149: proc 4 (Shuttle:1) problem1.pml:107 (state 34) [offer.refuse = 1]

151: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

Shuttle 3: order refused152: proc 4 (Shuttle:1) problem1.pml:108 (state 35) [printf('Shuttle %d: order refused',id)]

154: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

155: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 0 from shuttle 1

156: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

157: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

159: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 31) [else]

160: proc 4 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

161: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 32) [minCharge = minCharge]

162: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 33) [assignedId = assignedId]

164: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

166: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

167: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 0 from shuttle 2

168: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

169: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

170: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 28) [(((offer.charge<minCharge)&&!(offer.refuse)))]

171: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 29) [minCharge = offer.charge]

172: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 30) [assignedId = offer.id]

174: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

176: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

177: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 0 from shuttle 3

178: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

179: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

180: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 31) [else]

181: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 32) [minCharge = minCharge]

182: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 33) [assignedId = assignedId]

184: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

186: proc 5 (ShuttleManagementSystem:1) problem1.pml:59 (state 37) [else]

Shuttle Management System: order 0 assigned to shuttle 2

188: proc 5 (ShuttleManagementSystem:1) problem1.pml:60 (state 42) [printf('Shuttle Management System: order %d assigned to shuttle %d\\n',i,assignedId)]

189: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 43) [j = 0]

191: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

192: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

193: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

194: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

195: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

196: proc 1 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

197: proc 1 (Shuttle:1) problem1.pml:114 (state 43) [else]

198: proc 1 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

202: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

204: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

205: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

206: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

207: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

208: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

210: proc 2 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

211: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

212: proc 2 (Shuttle:1) problem1.pml:114 (state 43) [else]

213: proc 2 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

215: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

216: proc 5 (ShuttleManagementSystem:1) problem1.pml:63 (state 45) [((j==assignedId))]

217: proc 5 (ShuttleManagementSystem:1) problem1.pml:63 (state 46) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

219: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

223: proc 3 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

224: proc 3 (Shuttle:1) problem1.pml:113 (state 40) [((order.size>=0))]

225: proc 3 (Shuttle:1) problem1.pml:113 (state 41) [orders!order.start,order.end,order.size]

Shuttle 2: offer accepted by management226: proc 3 (Shuttle:1) problem1.pml:113 (state 42) [printf('Shuttle %d: offer accepted by management',id)]

227: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

230: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

231: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

232: proc 3 (Shuttle:1) problem1.pml:116 (state 47) [((nempty(orders)&&!(processingOrder)))]

233: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

234: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

236: proc 3 (Shuttle:1) problem1.pml:117 (state 48) [orders?currentOrder.start,currentOrder.end,currentOrder.size]

237: proc 4 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

238: proc 3 (Shuttle:1) problem1.pml:118 (state 49) [processingOrder = 1]

239: proc 3 (Shuttle:1) problem1.pml:119 (state 50) [destination = currentOrder.start]

240: proc 3 (Shuttle:1) problem1.pml:120 (state 51) [travelling = 1]

241: proc 4 (Shuttle:1) problem1.pml:114 (state 43) [else]

242: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

Shuttle 2: beggining new order from station 1 to station 3 with size &d243: proc 3 (Shuttle:1) problem1.pml:121 (state 52) [printf('Shuttle %d: beggining new order from station %d to station %d with size &d',id,currentOrder.start,currentOrder.end,currentOrder.size)]

245: proc 3 (Shuttle:1) problem1.pml:125 (state 56) [else]

246: proc 5 (ShuttleManagementSystem:1) problem1.pml:66 (state 54) [else]

248: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 59) [i = (i+1)]

250: proc 4 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

253: proc 3 (Shuttle:1) problem1.pml:125 (state 57) [direction = -(1)]

Shuttle 2: travelling right to left254: proc 3 (Shuttle:1) problem1.pml:125 (state 58) [printf('Shuttle %d: travelling right to left',id)]

255: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 9) [((i<=(2-1)))]

257: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 10) [j = 0]

259: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 11) [j = 0]

261: proc 3 (Shuttle:1) problem1.pml:145 (state 83) [((travelling&&processingOrder))]

262: proc 3 (Shuttle:1) problem1.pml:147 (state 84) [nextStation = 0]

263: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

264: proc 3 (Shuttle:1) problem1.pml:147 (state 85) [nextStation = (currentStation+direction)]

Shuttle Management System: sending order 1 to shuttle 0

265: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

266: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

267: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

268: proc 3 (Shuttle:1) problem1.pml:151 (state 90) [else]

270: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

Shuttle Management System: sending order 1 to shuttle 1

271: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

272: proc 3 (Shuttle:1) problem1.pml:151 (state 91) [(1)]

274: proc 1 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

Shuttle 0: processing offer for newly received order275: proc 1 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

276: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

277: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

278: proc 3 (Shuttle:1) problem1.pml:154 (state 94) []

279: proc 2 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

280: proc 3 (Shuttle:1) problem1.pml:154 (state 95) [request.id = id]

281: proc 1 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

282: proc 3 (Shuttle:1) problem1.pml:154 (state 96) [request.direction = direction]

Shuttle 1: processing offer for newly received order284: proc 2 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

285: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

286: proc 2 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

287: proc 2 (Shuttle:1) problem1.pml:88 (state 6) [else]

288: proc 3 (Shuttle:1) problem1.pml:154 (state 97) [request.track = nextStation]

Shuttle Management System: sending order 1 to shuttle 2

289: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

290: proc 1 (Shuttle:1) problem1.pml:88 (state 6) [else]

291: proc 1 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

292: proc 3 (Shuttle:1) problem1.pml:156 (state 98) []

Shuttle 2: requesting access to travel from station 2 to statiod 1293: proc 3 (Shuttle:1) problem1.pml:156 (state 99) [printf('Shuttle %d: requesting access to travel from station %d to statiod %d',id,currentStation,nextStation)]

294: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

296: proc 1 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

297: proc 1 (Shuttle:1) problem1.pml:93 (state 13) [else]

299: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

300: proc 1 (Shuttle:1) problem1.pml:93 (state 14) [distance = (order.start-currentPosition)]

301: proc 3 (Shuttle:1) problem1.pml:158 (state 100) [shuttleRequests!request.track,request.direction,request.id]

303: proc 6 (RailwayNetwork:1) problem1.pml:183 (state 1) [shuttleRequests?request.track,request.direction,request.id]

304: proc 6 (RailwayNetwork:1) problem1.pml:185 (state 2) []

305: proc 6 (RailwayNetwork:1) problem1.pml:186 (state 3) [request.direction = 1]

306: proc 2 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

307: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 12) [((j<=(4-1)))]

308: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 4) [(!(tracks.trackL2R[request.track]))]

Shuttle Management System: sending order 1 to shuttle 3

310: proc 5 (ShuttleManagementSystem:1) problem1.pml:44 (state 13) [printf('Shuttle Management System: sending order %d to shuttle %d\\n',i,j)]

311: proc 5 (ShuttleManagementSystem:1) problem1.pml:45 (state 14) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

312: proc 5 (ShuttleManagementSystem:1) problem1.pml:43 (state 15) [j = (j+1)]

313: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 5) [tracks.trackL2R[request.track] = 1]

314: proc 1 (Shuttle:1) problem1.pml:97 (state 19) [else]

315: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 6) [reply.granted = 1]

318: proc 4 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

319: proc 1 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

Shuttle 3: processing offer for newly received order320: proc 4 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

321: proc 2 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

322: proc 5 (ShuttleManagementSystem:1) problem1.pml:46 (state 16) [else]

323: proc 2 (Shuttle:1) problem1.pml:93 (state 13) [else]

324: proc 2 (Shuttle:1) problem1.pml:93 (state 14) [distance = (order.start-currentPosition)]

327: proc 5 (ShuttleManagementSystem:1) problem1.pml:48 (state 21) [minCharge = 2147483647]

Shuttle 0: start destination of the order is 1 station(s) away from its current position328: proc 1 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

Shuttle 0: current load is 0, order size is 2, capacity is 4, 329: proc 1 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

331: proc 1 (Shuttle:1) problem1.pml:102 (state 25) []

332: proc 4 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

333: proc 1 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

334: proc 2 (Shuttle:1) problem1.pml:97 (state 19) [else]

335: proc 1 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

336: proc 4 (Shuttle:1) problem1.pml:88 (state 6) [else]

337: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 22) [assignedId = 0]

338: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 23) [j = 0]

Railway Network: granting access to track from station 1 to station 2339: proc 6 (RailwayNetwork:1) problem1.pml:189 (state 7) [printf('Railway Network: granting access to track from station %d to station %d',request.track,((request.track+1)%4))]

340: proc 4 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

343: proc 2 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

347: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

348: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 1 from shuttle 0

349: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

350: proc 1 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

351: proc 1 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

352: proc 6 (RailwayNetwork:1) problem1.pml:201 (state 25) [railwayReplies[request.id]!reply.granted]

353: proc 3 (Shuttle:1) problem1.pml:159 (state 101) [railwayReplies[id]?reply.granted]

Shuttle 0: order accepted354: proc 1 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

Shuttle 1: start destination of the order is 1 station(s) away from its current position355: proc 2 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

Shuttle 1: current load is 0, order size is 2, capacity is 2, 356: proc 2 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

357: proc 3 (Shuttle:1) problem1.pml:161 (state 102) [(reply.granted)]

358: proc 2 (Shuttle:1) problem1.pml:102 (state 25) []

360: proc 4 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

363: proc 4 (Shuttle:1) problem1.pml:92 (state 11) [((currentPosition>order.start))]

Shuttle 2: travelling from station 2 to statiod 1364: proc 3 (Shuttle:1) problem1.pml:165 (state 111) [printf('Shuttle %d: travelling from station %d to statiod %d',id,currentStation,nextStation)]

365: proc 1 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

366: proc 3 (Shuttle:1) problem1.pml:166 (state 112) [currentStation = nextStation]

367: proc 4 (Shuttle:1) problem1.pml:92 (state 12) [distance = (currentPosition-order.start)]

368: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

369: proc 2 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

371: proc 2 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

372: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 28) [(((offer.charge<minCharge)&&!(offer.refuse)))]

373: proc 3 (Shuttle:1) problem1.pml:169 (state 115) [((direction==-(1)))]

374: proc 3 (Shuttle:1) problem1.pml:169 (state 116) [tracks.trackR2L[request.track] = 0]

375: proc 2 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

377: proc 3 (Shuttle:1) problem1.pml:172 (state 119) [((currentStation==destination))]

378: proc 3 (Shuttle:1) problem1.pml:172 (state 120) [travelling = 0]

379: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 29) [minCharge = offer.charge]

380: proc 2 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

Shuttle 1: order accepted381: proc 2 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

383: proc 4 (Shuttle:1) problem1.pml:97 (state 19) [else]

385: proc 2 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

386: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 30) [assignedId = offer.id]

388: proc 4 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

391: proc 3 (Shuttle:1) problem1.pml:83 (state 1) [managementOrders[id]?order.start,order.end,order.size]

Shuttle 2: processing offer for newly received order392: proc 3 (Shuttle:1) problem1.pml:84 (state 2) [printf('Shuttle %d: processing offer for newly received order',id)]

Shuttle 3: start destination of the order is 1 station(s) away from its current position393: proc 4 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

394: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

Shuttle 3: current load is 0, order size is 2, capacity is 3, 395: proc 4 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

397: proc 4 (Shuttle:1) problem1.pml:102 (state 25) []

398: proc 3 (Shuttle:1) problem1.pml:86 (state 3) [currentPosition = 0]

399: proc 3 (Shuttle:1) problem1.pml:88 (state 6) [else]

400: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

401: proc 4 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

402: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 1 from shuttle 1

403: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

404: proc 4 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

405: proc 4 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

406: proc 4 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

407: proc 3 (Shuttle:1) problem1.pml:88 (state 7) [currentPosition = currentStation]

Shuttle 3: order accepted408: proc 4 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

409: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

411: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 31) [else]

412: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 32) [minCharge = minCharge]

414: proc 3 (Shuttle:1) problem1.pml:91 (state 10) [distance = 0]

415: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 33) [assignedId = assignedId]

417: proc 3 (Shuttle:1) problem1.pml:93 (state 13) [else]

418: proc 3 (Shuttle:1) problem1.pml:93 (state 14) [distance = (order.start-currentPosition)]

419: proc 4 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

421: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

422: proc 3 (Shuttle:1) problem1.pml:97 (state 19) [else]

424: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

425: proc 3 (Shuttle:1) problem1.pml:97 (state 20) [distance = distance]

426: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 1 from shuttle 2

428: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

429: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

Shuttle 2: start destination of the order is 1 station(s) away from its current position430: proc 3 (Shuttle:1) problem1.pml:99 (state 23) [printf('Shuttle %d: start destination of the order is %d station(s) away from its current position',id,distance)]

Shuttle 2: current load is 0, order size is 2, capacity is 5, 431: proc 3 (Shuttle:1) problem1.pml:100 (state 24) [printf('Shuttle %d: current load is %d, order size is %d, capacity is %d, ',id,currentLoad,order.size,capacity)]

432: proc 3 (Shuttle:1) problem1.pml:102 (state 25) []

433: proc 3 (Shuttle:1) problem1.pml:103 (state 26) [((((currentLoad+order.size)<=capacity)&&(distance<=2)))]

434: proc 3 (Shuttle:1) problem1.pml:104 (state 27) [offer.id = id]

435: proc 3 (Shuttle:1) problem1.pml:104 (state 28) [offer.charge = charge]

436: proc 3 (Shuttle:1) problem1.pml:104 (state 29) [offer.refuse = 0]

437: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 31) [else]

Shuttle 2: order accepted438: proc 3 (Shuttle:1) problem1.pml:105 (state 30) [printf('Shuttle %d: order accepted',id)]

440: proc 3 (Shuttle:1) problem1.pml:110 (state 38) [shuttleOffers!offer.id,offer.charge,offer.refuse]

441: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 32) [minCharge = minCharge]

442: proc 5 (ShuttleManagementSystem:1) problem1.pml:57 (state 33) [assignedId = assignedId]

444: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

446: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 24) [((j<=(4-1)))]

447: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 25) []

Shuttle Management System: receiving offer for order 1 from shuttle 3

448: proc 5 (ShuttleManagementSystem:1) problem1.pml:53 (state 26) [printf('Shuttle Management System: receiving offer for order %d from shuttle %d\\n',i,j)]

449: proc 5 (ShuttleManagementSystem:1) problem1.pml:54 (state 27) [shuttleOffers?offer.id,offer.charge,offer.refuse]

450: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 28) [(((offer.charge<minCharge)&&!(offer.refuse)))]

451: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 29) [minCharge = offer.charge]

452: proc 5 (ShuttleManagementSystem:1) problem1.pml:56 (state 30) [assignedId = offer.id]

454: proc 5 (ShuttleManagementSystem:1) problem1.pml:51 (state 36) [j = (j+1)]

456: proc 5 (ShuttleManagementSystem:1) problem1.pml:59 (state 37) [else]

Shuttle Management System: order 1 assigned to shuttle 2

458: proc 5 (ShuttleManagementSystem:1) problem1.pml:60 (state 42) [printf('Shuttle Management System: order %d assigned to shuttle %d\\n',i,assignedId)]

459: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 43) [j = 0]

461: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

462: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

463: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

464: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

465: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

467: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

468: proc 1 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

469: proc 1 (Shuttle:1) problem1.pml:114 (state 43) [else]

470: proc 1 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

474: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

475: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

476: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

477: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

478: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

480: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

482: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

483: proc 5 (ShuttleManagementSystem:1) problem1.pml:63 (state 45) [((j==assignedId))]

484: proc 2 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

485: proc 2 (Shuttle:1) problem1.pml:114 (state 43) [else]

486: proc 5 (ShuttleManagementSystem:1) problem1.pml:63 (state 46) [managementOrders[j]!orders[i].start,orders[i].end,orders[i].size]

488: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

489: proc 3 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

491: proc 3 (Shuttle:1) problem1.pml:113 (state 40) [((order.size>=0))]

492: proc 2 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

495: proc 3 (Shuttle:1) problem1.pml:113 (state 41) [orders!order.start,order.end,order.size]

496: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 44) [((j<=(4-1)))]

Shuttle 2: offer accepted by management497: proc 3 (Shuttle:1) problem1.pml:113 (state 42) [printf('Shuttle %d: offer accepted by management',id)]

498: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 47) [else]

499: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 48) []

500: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 49) [dummy.size = -(1)]

502: proc 5 (ShuttleManagementSystem:1) problem1.pml:64 (state 50) [managementOrders[j]!dummy.start,dummy.end,dummy.size]

504: proc 5 (ShuttleManagementSystem:1) problem1.pml:61 (state 53) [j = (j+1)]

507: proc 5 (ShuttleManagementSystem:1) problem1.pml:66 (state 54) [else]

508: proc 3 (Shuttle:1) problem1.pml:127 (state 61) [((!(travelling)&&processingOrder))]

509: proc 3 (Shuttle:1) problem1.pml:129 (state 62) [((destination==currentOrder.start))]

Shuttle 2: loading 4 people at station 1510: proc 3 (Shuttle:1) problem1.pml:130 (state 63) [printf('Shuttle %d: loading %d people at station %d',id,currentOrder.size,currentOrder.start)]

511: proc 4 (Shuttle:1) problem1.pml:111 (state 39) [managementOrders[id]?order.start,order.end,order.size]

513: proc 4 (Shuttle:1) problem1.pml:114 (state 43) [else]

514: proc 5 (ShuttleManagementSystem:1) problem1.pml:41 (state 59) [i = (i+1)]

515: proc 3 (Shuttle:1) problem1.pml:131 (state 64) [currentLoad = (currentLoad+currentOrder.size)]

517: proc 4 (Shuttle:1) problem1.pml:114 (state 44) [(1)]

519: proc 5 (ShuttleManagementSystem:1) problem1.pml:67 (state 60) [else]

520: proc 3 (Shuttle:1) problem1.pml:132 (state 65) [destination = currentOrder.end]

521: proc 3 (Shuttle:1) problem1.pml:133 (state 66) [travelling = 1]

523: proc 3 (Shuttle:1) problem1.pml:135 (state 67) [(((currentOrder.start>=currentStation)&&((currentOrder.start-currentStation)<(4/2))))]

524: proc 3 (Shuttle:1) problem1.pml:136 (state 68) [direction = 1]

Shuttle 2: travelling left to right525: proc 3 (Shuttle:1) problem1.pml:136 (state 69) [printf('Shuttle %d: travelling left to right',id)]

530: proc 3 (Shuttle:1) problem1.pml:145 (state 83) [((travelling&&processingOrder))]

531: proc 3 (Shuttle:1) problem1.pml:147 (state 84) [nextStation = 0]

532: proc 3 (Shuttle:1) problem1.pml:147 (state 85) [nextStation = (currentStation+direction)]

533: proc 3 (Shuttle:1) problem1.pml:151 (state 90) [else]

534: proc 3 (Shuttle:1) problem1.pml:151 (state 91) [(1)]

536: proc 3 (Shuttle:1) problem1.pml:154 (state 94) []

537: proc 3 (Shuttle:1) problem1.pml:154 (state 95) [request.id = id]

538: proc 3 (Shuttle:1) problem1.pml:154 (state 96) [request.direction = direction]

539: proc 3 (Shuttle:1) problem1.pml:154 (state 97) [request.track = nextStation]

540: proc 3 (Shuttle:1) problem1.pml:156 (state 98) []

Shuttle 2: requesting access to travel from station 1 to statiod 2541: proc 3 (Shuttle:1) problem1.pml:156 (state 99) [printf('Shuttle %d: requesting access to travel from station %d to statiod %d',id,currentStation,nextStation)]

543: proc 3 (Shuttle:1) problem1.pml:158 (state 100) [shuttleRequests!request.track,request.direction,request.id]

544: proc 6 (RailwayNetwork:1) problem1.pml:183 (state 1) [shuttleRequests?request.track,request.direction,request.id]

545: proc 6 (RailwayNetwork:1) problem1.pml:185 (state 2) []

546: proc 6 (RailwayNetwork:1) problem1.pml:186 (state 3) [request.direction = 1]

547: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 4) [(!(tracks.trackL2R[request.track]))]

548: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 5) [tracks.trackL2R[request.track] = 1]

549: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 6) [reply.granted = 1]

Railway Network: granting access to track from station 2 to station 3550: proc 6 (RailwayNetwork:1) problem1.pml:189 (state 7) [printf('Railway Network: granting access to track from station %d to station %d',request.track,((request.track+1)%4))]

553: proc 6 (RailwayNetwork:1) problem1.pml:201 (state 25) [railwayReplies[request.id]!reply.granted]

555: proc 3 (Shuttle:1) problem1.pml:159 (state 101) [railwayReplies[id]?reply.granted]

556: proc 3 (Shuttle:1) problem1.pml:161 (state 102) [(reply.granted)]

Shuttle 2: travelling from station 1 to statiod 2558: proc 3 (Shuttle:1) problem1.pml:165 (state 111) [printf('Shuttle %d: travelling from station %d to statiod %d',id,currentStation,nextStation)]

559: proc 3 (Shuttle:1) problem1.pml:166 (state 112) [currentStation = nextStation]

560: proc 3 (Shuttle:1) problem1.pml:168 (state 113) [((direction==1))]

561: proc 3 (Shuttle:1) problem1.pml:168 (state 114) [tracks.trackL2R[request.track] = 0]

563: proc 3 (Shuttle:1) problem1.pml:173 (state 121) [else]

564: proc 3 (Shuttle:1) problem1.pml:173 (state 122) [travelling = 1]

567: proc 3 (Shuttle:1) problem1.pml:145 (state 83) [((travelling&&processingOrder))]

568: proc 3 (Shuttle:1) problem1.pml:147 (state 84) [nextStation = 0]

569: proc 3 (Shuttle:1) problem1.pml:147 (state 85) [nextStation = (currentStation+direction)]

570: proc 3 (Shuttle:1) problem1.pml:151 (state 90) [else]

571: proc 3 (Shuttle:1) problem1.pml:151 (state 91) [(1)]

573: proc 3 (Shuttle:1) problem1.pml:154 (state 94) []

574: proc 3 (Shuttle:1) problem1.pml:154 (state 95) [request.id = id]

575: proc 3 (Shuttle:1) problem1.pml:154 (state 96) [request.direction = direction]

576: proc 3 (Shuttle:1) problem1.pml:154 (state 97) [request.track = nextStation]

577: proc 3 (Shuttle:1) problem1.pml:156 (state 98) []

Shuttle 2: requesting access to travel from station 2 to statiod 3578: proc 3 (Shuttle:1) problem1.pml:156 (state 99) [printf('Shuttle %d: requesting access to travel from station %d to statiod %d',id,currentStation,nextStation)]

580: proc 3 (Shuttle:1) problem1.pml:158 (state 100) [shuttleRequests!request.track,request.direction,request.id]

581: proc 6 (RailwayNetwork:1) problem1.pml:183 (state 1) [shuttleRequests?request.track,request.direction,request.id]

582: proc 6 (RailwayNetwork:1) problem1.pml:185 (state 2) []

583: proc 6 (RailwayNetwork:1) problem1.pml:186 (state 3) [request.direction = 1]

584: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 4) [(!(tracks.trackL2R[request.track]))]

585: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 5) [tracks.trackL2R[request.track] = 1]

586: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 6) [reply.granted = 1]

Railway Network: granting access to track from station 3 to station 0587: proc 6 (RailwayNetwork:1) problem1.pml:189 (state 7) [printf('Railway Network: granting access to track from station %d to station %d',request.track,((request.track+1)%4))]

590: proc 6 (RailwayNetwork:1) problem1.pml:201 (state 25) [railwayReplies[request.id]!reply.granted]

592: proc 3 (Shuttle:1) problem1.pml:159 (state 101) [railwayReplies[id]?reply.granted]

593: proc 3 (Shuttle:1) problem1.pml:161 (state 102) [(reply.granted)]

Shuttle 2: travelling from station 2 to statiod 3595: proc 3 (Shuttle:1) problem1.pml:165 (state 111) [printf('Shuttle %d: travelling from station %d to statiod %d',id,currentStation,nextStation)]

596: proc 3 (Shuttle:1) problem1.pml:166 (state 112) [currentStation = nextStation]

597: proc 3 (Shuttle:1) problem1.pml:168 (state 113) [((direction==1))]

598: proc 3 (Shuttle:1) problem1.pml:168 (state 114) [tracks.trackL2R[request.track] = 0]

600: proc 3 (Shuttle:1) problem1.pml:172 (state 119) [((currentStation==destination))]

601: proc 3 (Shuttle:1) problem1.pml:172 (state 120) [travelling = 0]

604: proc 3 (Shuttle:1) problem1.pml:127 (state 61) [((!(travelling)&&processingOrder))]

605: proc 3 (Shuttle:1) problem1.pml:139 (state 75) [((destination==currentOrder.end))]

Shuttle 2: unloading 4 people at station 3606: proc 3 (Shuttle:1) problem1.pml:140 (state 76) [printf('Shuttle %d: unloading %d people at station %d',id,currentOrder.size,currentOrder.end)]

607: proc 3 (Shuttle:1) problem1.pml:141 (state 77) [currentLoad = (currentLoad-currentOrder.size)]

608: proc 3 (Shuttle:1) problem1.pml:142 (state 78) [processingOrder = 0]

611: proc 3 (Shuttle:1) problem1.pml:116 (state 47) [((nempty(orders)&&!(processingOrder)))]

612: proc 3 (Shuttle:1) problem1.pml:117 (state 48) [orders?currentOrder.start,currentOrder.end,currentOrder.size]

613: proc 3 (Shuttle:1) problem1.pml:118 (state 49) [processingOrder = 1]

614: proc 3 (Shuttle:1) problem1.pml:119 (state 50) [destination = currentOrder.start]

615: proc 3 (Shuttle:1) problem1.pml:120 (state 51) [travelling = 1]

Shuttle 2: beggining new order from station 2 to station 3 with size &d616: proc 3 (Shuttle:1) problem1.pml:121 (state 52) [printf('Shuttle %d: beggining new order from station %d to station %d with size &d',id,currentOrder.start,currentOrder.end,currentOrder.size)]

617: proc 3 (Shuttle:1) problem1.pml:125 (state 56) [else]

618: proc 3 (Shuttle:1) problem1.pml:125 (state 57) [direction = -(1)]

Shuttle 2: travelling right to left619: proc 3 (Shuttle:1) problem1.pml:125 (state 58) [printf('Shuttle %d: travelling right to left',id)]

622: proc 3 (Shuttle:1) problem1.pml:145 (state 83) [((travelling&&processingOrder))]

623: proc 3 (Shuttle:1) problem1.pml:147 (state 84) [nextStation = 0]

624: proc 3 (Shuttle:1) problem1.pml:147 (state 85) [nextStation = (currentStation+direction)]

625: proc 3 (Shuttle:1) problem1.pml:151 (state 90) [else]

626: proc 3 (Shuttle:1) problem1.pml:151 (state 91) [(1)]

628: proc 3 (Shuttle:1) problem1.pml:154 (state 94) []

629: proc 3 (Shuttle:1) problem1.pml:154 (state 95) [request.id = id]

630: proc 3 (Shuttle:1) problem1.pml:154 (state 96) [request.direction = direction]

631: proc 3 (Shuttle:1) problem1.pml:154 (state 97) [request.track = nextStation]

632: proc 3 (Shuttle:1) problem1.pml:156 (state 98) []

Shuttle 2: requesting access to travel from station 3 to statiod 2633: proc 3 (Shuttle:1) problem1.pml:156 (state 99) [printf('Shuttle %d: requesting access to travel from station %d to statiod %d',id,currentStation,nextStation)]

635: proc 3 (Shuttle:1) problem1.pml:158 (state 100) [shuttleRequests!request.track,request.direction,request.id]

636: proc 6 (RailwayNetwork:1) problem1.pml:183 (state 1) [shuttleRequests?request.track,request.direction,request.id]

637: proc 6 (RailwayNetwork:1) problem1.pml:185 (state 2) []

638: proc 6 (RailwayNetwork:1) problem1.pml:186 (state 3) [request.direction = 1]

639: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 4) [(!(tracks.trackL2R[request.track]))]

640: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 5) [tracks.trackL2R[request.track] = 1]

641: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 6) [reply.granted = 1]

Railway Network: granting access to track from station 2 to station 3642: proc 6 (RailwayNetwork:1) problem1.pml:189 (state 7) [printf('Railway Network: granting access to track from station %d to station %d',request.track,((request.track+1)%4))]

645: proc 6 (RailwayNetwork:1) problem1.pml:201 (state 25) [railwayReplies[request.id]!reply.granted]

646: proc 3 (Shuttle:1) problem1.pml:159 (state 101) [railwayReplies[id]?reply.granted]

647: proc 3 (Shuttle:1) problem1.pml:161 (state 102) [(reply.granted)]

Shuttle 2: travelling from station 3 to statiod 2650: proc 3 (Shuttle:1) problem1.pml:165 (state 111) [printf('Shuttle %d: travelling from station %d to statiod %d',id,currentStation,nextStation)]

651: proc 3 (Shuttle:1) problem1.pml:166 (state 112) [currentStation = nextStation]

652: proc 3 (Shuttle:1) problem1.pml:169 (state 115) [((direction==-(1)))]

653: proc 3 (Shuttle:1) problem1.pml:169 (state 116) [tracks.trackR2L[request.track] = 0]

655: proc 3 (Shuttle:1) problem1.pml:172 (state 119) [((currentStation==destination))]

656: proc 3 (Shuttle:1) problem1.pml:172 (state 120) [travelling = 0]

659: proc 3 (Shuttle:1) problem1.pml:127 (state 61) [((!(travelling)&&processingOrder))]

660: proc 3 (Shuttle:1) problem1.pml:129 (state 62) [((destination==currentOrder.start))]

Shuttle 2: loading 2 people at station 2661: proc 3 (Shuttle:1) problem1.pml:130 (state 63) [printf('Shuttle %d: loading %d people at station %d',id,currentOrder.size,currentOrder.start)]

662: proc 3 (Shuttle:1) problem1.pml:131 (state 64) [currentLoad = (currentLoad+currentOrder.size)]

663: proc 3 (Shuttle:1) problem1.pml:132 (state 65) [destination = currentOrder.end]

664: proc 3 (Shuttle:1) problem1.pml:133 (state 66) [travelling = 1]

665: proc 3 (Shuttle:1) problem1.pml:135 (state 67) [(((currentOrder.start>=currentStation)&&((currentOrder.start-currentStation)<(4/2))))]

666: proc 3 (Shuttle:1) problem1.pml:136 (state 68) [direction = 1]

Shuttle 2: travelling left to right667: proc 3 (Shuttle:1) problem1.pml:136 (state 69) [printf('Shuttle %d: travelling left to right',id)]

671: proc 3 (Shuttle:1) problem1.pml:145 (state 83) [((travelling&&processingOrder))]

672: proc 3 (Shuttle:1) problem1.pml:147 (state 84) [nextStation = 0]

673: proc 3 (Shuttle:1) problem1.pml:147 (state 85) [nextStation = (currentStation+direction)]

674: proc 3 (Shuttle:1) problem1.pml:151 (state 90) [else]

675: proc 3 (Shuttle:1) problem1.pml:151 (state 91) [(1)]

677: proc 3 (Shuttle:1) problem1.pml:154 (state 94) []

678: proc 3 (Shuttle:1) problem1.pml:154 (state 95) [request.id = id]

679: proc 3 (Shuttle:1) problem1.pml:154 (state 96) [request.direction = direction]

680: proc 3 (Shuttle:1) problem1.pml:154 (state 97) [request.track = nextStation]

681: proc 3 (Shuttle:1) problem1.pml:156 (state 98) []

Shuttle 2: requesting access to travel from station 2 to statiod 3682: proc 3 (Shuttle:1) problem1.pml:156 (state 99) [printf('Shuttle %d: requesting access to travel from station %d to statiod %d',id,currentStation,nextStation)]

684: proc 3 (Shuttle:1) problem1.pml:158 (state 100) [shuttleRequests!request.track,request.direction,request.id]

685: proc 6 (RailwayNetwork:1) problem1.pml:183 (state 1) [shuttleRequests?request.track,request.direction,request.id]

686: proc 6 (RailwayNetwork:1) problem1.pml:185 (state 2) []

687: proc 6 (RailwayNetwork:1) problem1.pml:186 (state 3) [request.direction = 1]

688: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 4) [(!(tracks.trackL2R[request.track]))]

689: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 5) [tracks.trackL2R[request.track] = 1]

690: proc 6 (RailwayNetwork:1) problem1.pml:188 (state 6) [reply.granted = 1]

Railway Network: granting access to track from station 3 to station 0691: proc 6 (RailwayNetwork:1) problem1.pml:189 (state 7) [printf('Railway Network: granting access to track from station %d to station %d',request.track,((request.track+1)%4))]

694: proc 6 (RailwayNetwork:1) problem1.pml:201 (state 25) [railwayReplies[request.id]!reply.granted]

695: proc 3 (Shuttle:1) problem1.pml:159 (state 101) [railwayReplies[id]?reply.granted]

696: proc 3 (Shuttle:1) problem1.pml:161 (state 102) [(reply.granted)]

Shuttle 2: travelling from station 2 to statiod 3699: proc 3 (Shuttle:1) problem1.pml:165 (state 111) [printf('Shuttle %d: travelling from station %d to statiod %d',id,currentStation,nextStation)]

700: proc 3 (Shuttle:1) problem1.pml:166 (state 112) [currentStation = nextStation]

701: proc 3 (Shuttle:1) problem1.pml:168 (state 113) [((direction==1))]

702: proc 3 (Shuttle:1) problem1.pml:168 (state 114) [tracks.trackL2R[request.track] = 0]

704: proc 3 (Shuttle:1) problem1.pml:172 (state 119) [((currentStation==destination))]

705: proc 3 (Shuttle:1) problem1.pml:172 (state 120) [travelling = 0]

708: proc 3 (Shuttle:1) problem1.pml:127 (state 61) [((!(travelling)&&processingOrder))]

709: proc 3 (Shuttle:1) problem1.pml:139 (state 75) [((destination==currentOrder.end))]

Shuttle 2: unloading 2 people at station 3710: proc 3 (Shuttle:1) problem1.pml:140 (state 76) [printf('Shuttle %d: unloading %d people at station %d',id,currentOrder.size,currentOrder.end)]

711: proc 3 (Shuttle:1) problem1.pml:141 (state 77) [currentLoad = (currentLoad-currentOrder.size)]

712: proc 3 (Shuttle:1) problem1.pml:142 (state 78) [processingOrder = 0]

timeout

#processes: 7

714: proc 6 (RailwayNetwork:1) problem1.pml:182 (state 26)

714: proc 5 (ShuttleManagementSystem:1) problem1.pml:68 (state 65)

714: proc 4 (Shuttle:1) problem1.pml:82 (state 125)

714: proc 3 (Shuttle:1) problem1.pml:82 (state 125)

714: proc 2 (Shuttle:1) problem1.pml:82 (state 125)

714: proc 1 (Shuttle:1) problem1.pml:82 (state 125)

714: proc 0 (:init::1) problem1.pml:216 (state 16)

7 processes created