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1  /*
2  * Scola Tutorial
3  * by Antoine B. Rauzy
4  * Two-way switches
5  */
6
7  domain SwitchState {UP, DOWN} end
8
9  block ElectricCircuit
10     block Phase
11         Boolean outPower true
12     end
13     block Switch1
14         SwitchState _state UP
15         Boolean inPower false
16         Boolean outPowerUp false
17         Boolean outPowerDown false
18         assertion Powering
19             set outPowerUp (if (eq _state UP) inPower false)
20             set outPowerDown (if (eq _state DOWN) inPower false)
21         end
22     end
23     block Switch2
24         SwitchState _state UP
25         Boolean inPowerUp false
26         Boolean inPowerDown false
27         Boolean outPower false
28         assertion Powering
29             set outPower (if (eq _state UP) inPowerUp inPowerDown)
30         end
31     end
32     block Lamp
33         Boolean inPower false
34     end
35     assertion Powering
36         set Switch1.inPower Phase.outPower
37         set Switch2.inPowerUp Switch1.outPowerUp
38         set Switch2.inPowerDown Switch1.outPowerDown
39         set Lamp.inPower Switch2.outPower
40     end
41 end
42
43 scenario Lamp as ElectricCircuit
44     scenario Switch1Lane as Switch1
45         state Initial
46         task Switch
47             set _state (if (eq _state UP) DOWN UP)
48         end
49         next Initial Switch
50         next Switch Switch
51     end
52     scenario Switch2Lane as Switch2
53         state Initial
54         task Switch
55             set _state (if (eq _state UP) DOWN UP)
56         end
57         next Initial Switch
58         next Switch Switch
59     end
60 end
61

```