EBS pseudocodes

December 2020

InitialCheckup

1: StartWatchdog() // Light up EBS actuator LEDs
2: **wait for** SDCIsReady
3:
4: StopWatchdog()
5: **wait for** !SDCIsReady
6:
7: StartWatchdog()
8: **if not** ESBEnergyFilled **then**
9:    Failure
10: **end if**
11: **if not** brakePressureCorrect **then**
12:    Failure
13: **end if**
14:
15: ASCloseSDC()
16: **wait for** SDCIsReady
17:
18: DisableEBSAct(1) // Disable actuator LED 1
19: **if not** brakePressureCorrect **then**
20:    Failure
21: **end if**
22: EnableEBSAct(1) // Enable actuator LED 1
23:
24: DisableEBSAct(2) // Disable actuator LED 2
25: **if not** brakePressureCorrect() **then**
26:    Failure
27: **end if**
28: EnableEBSAct(2) // Enable actuator LED 2
29: **return** Success

Supervisor

1: InitialCheckup()
2: EnableASDrivingMode()
3: **while** true **do**
4:   **if not** SDCready **then**
5:     TriggerEBS()
6:   **end if**
7:   **if not** SystemStable **then**
8:     TriggerEBS()
9:   **end if**
10:   wait(period)
11: **end while**

SystemStable

1: Data data
2: collectSensor(data)
3: **if not** correct(data) **then**
4:   **return** unstable
5: **end if**
6: **return** stable

Logic

1: getInputData()
2: **while** true **do**
3:   **if** AnyInputData(LOW) **then**
4:     TriggerEBS()
5:   **end if**
6:   **if not** WatchdogAlive **then**
7:     wait(period)
8:     **if** WatchdogAlive **then**
9:       continue
10:     **end if**
11:     TriggerEBS()
12:   **end if**
13: **end while**