**Safety Critical System**

Q = {dormant, safe\_shutdown, init, idle, monitoring, error\_diagnosis}  
Σ1 = {kill, sleep, start, init\_ok, begin\_monitoring, idle\_rescue, idle\_crash, retry\_init, monitor\_crash, monitor\_rescue, init\_crash, shutdown}  
Σ2 = {broadcast idle\_err\_msg, retry++, broadcast moni\_err\_msg, broadcast init\_err\_msg, system clean up}  
q0 : dormant  
Ѵ : retry : ℕ0; inlockdown : boolean.  
Λ : Transition specifications

1.   
2.   
3.   
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11.   
12.   
13.

**Init**

Q = {boot\_hw, senchk, tchk, psichk, ready}

Σ1 = {hw\_ok, senok, t\_ok, psi\_ok}

Σ2 = {}

q0 : boot\_hw

Ѵ = {}

Λ: Transition specifications

1.

2.

3.

4. tchk

5.