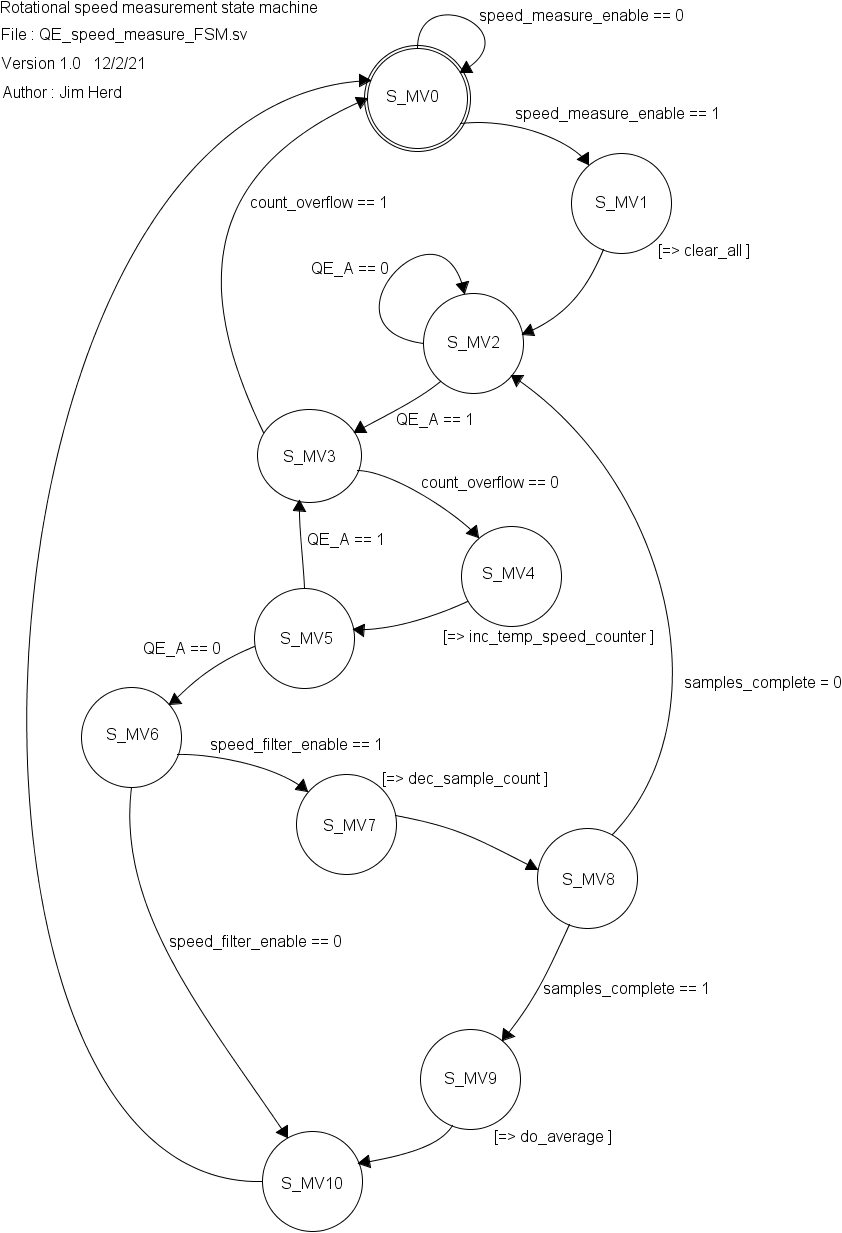
|  |  |  |  |
| --- | --- | --- | --- |
| FSM name : | QE\_speed\_measure\_FSM.sv | Date: | Feb 2021 |
| Section : | 1 of 1 | Author | Jim Herd |
| Notes : |  | | |



State Objects

|  |  |
| --- | --- |
| **States** | Notes |
| S\_MV0 | Power-on state |
| S\_MV1 |  |
| S\_MV2 |  |
| S\_MV3 |  |
| S\_MV4 |  |
| S\_MV5 |  |
| S\_MV6 |  |
| S\_MV7 |  |
| S\_MV8 |  |
| S\_MV9 |  |
| S\_MV10 |  |

Input objects

|  |  |  |
| --- | --- | --- |
| **Inputs** | Type | Notes |
| speed\_measure\_enable | binary |  |
| QE\_A | binary | A input from the quadrature encoder |
| count\_overflow | binary |  |
| speed\_filter\_enable | binary | Enable averaging filter. Allows averaging of 2, 4, 8, 16, or 32 consecutive speed readings. Value will have been set in subsystem configuration register. |

Output objects

|  |  |  |
| --- | --- | --- |
| **Outputs** | Type | Notes |
| clear\_all | binary |  |
| inc\_temp\_speed\_counter | binary |  |
| dec\_sample\_count | binary |  |
| do\_average | binary |  |