

The brochure of DSP F28335 Basic Control Platform C-Programming Code Sets

1. Program flow at the main() loop routine

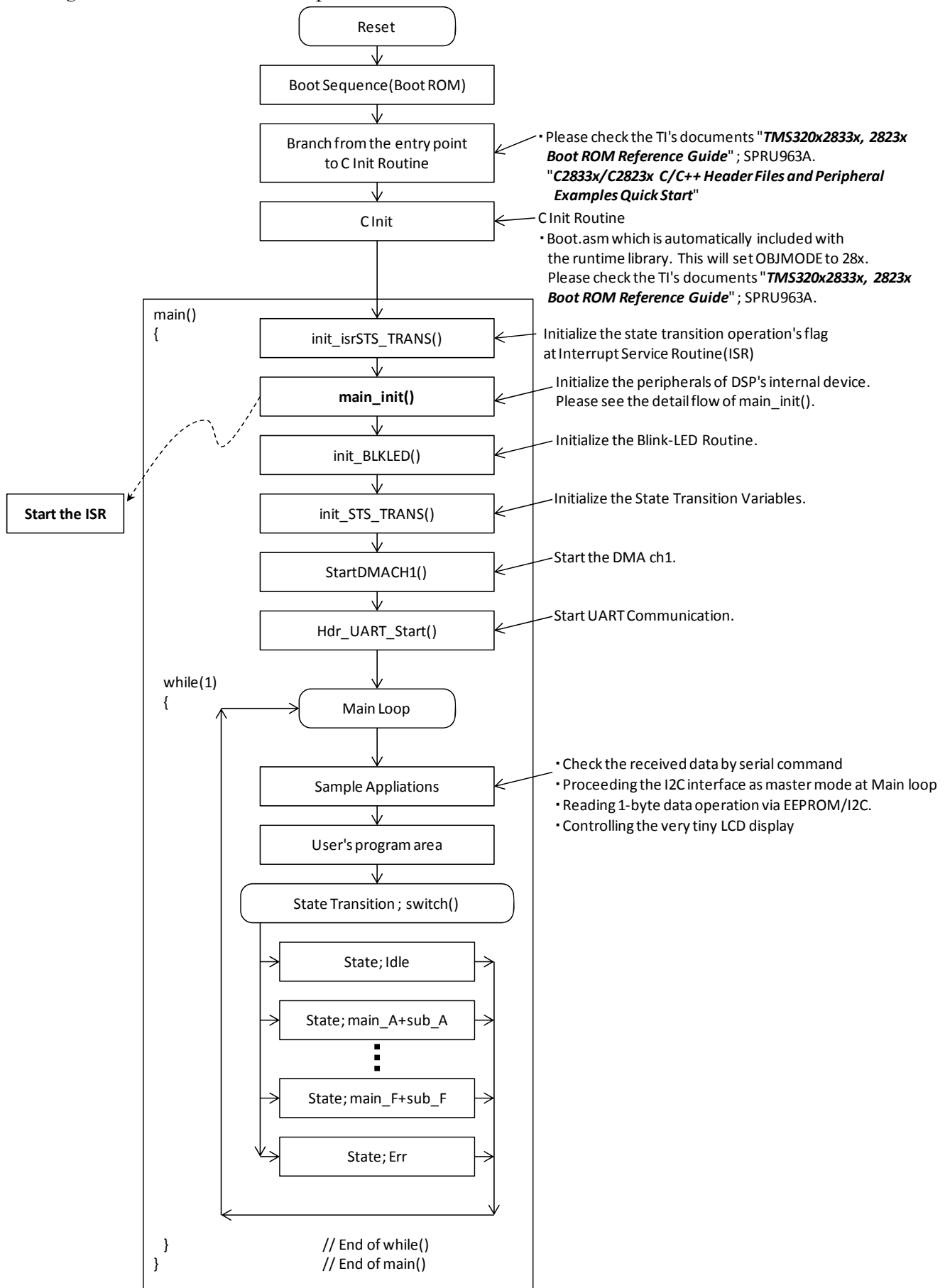


Fig.- 1 The flow of main() loop routine

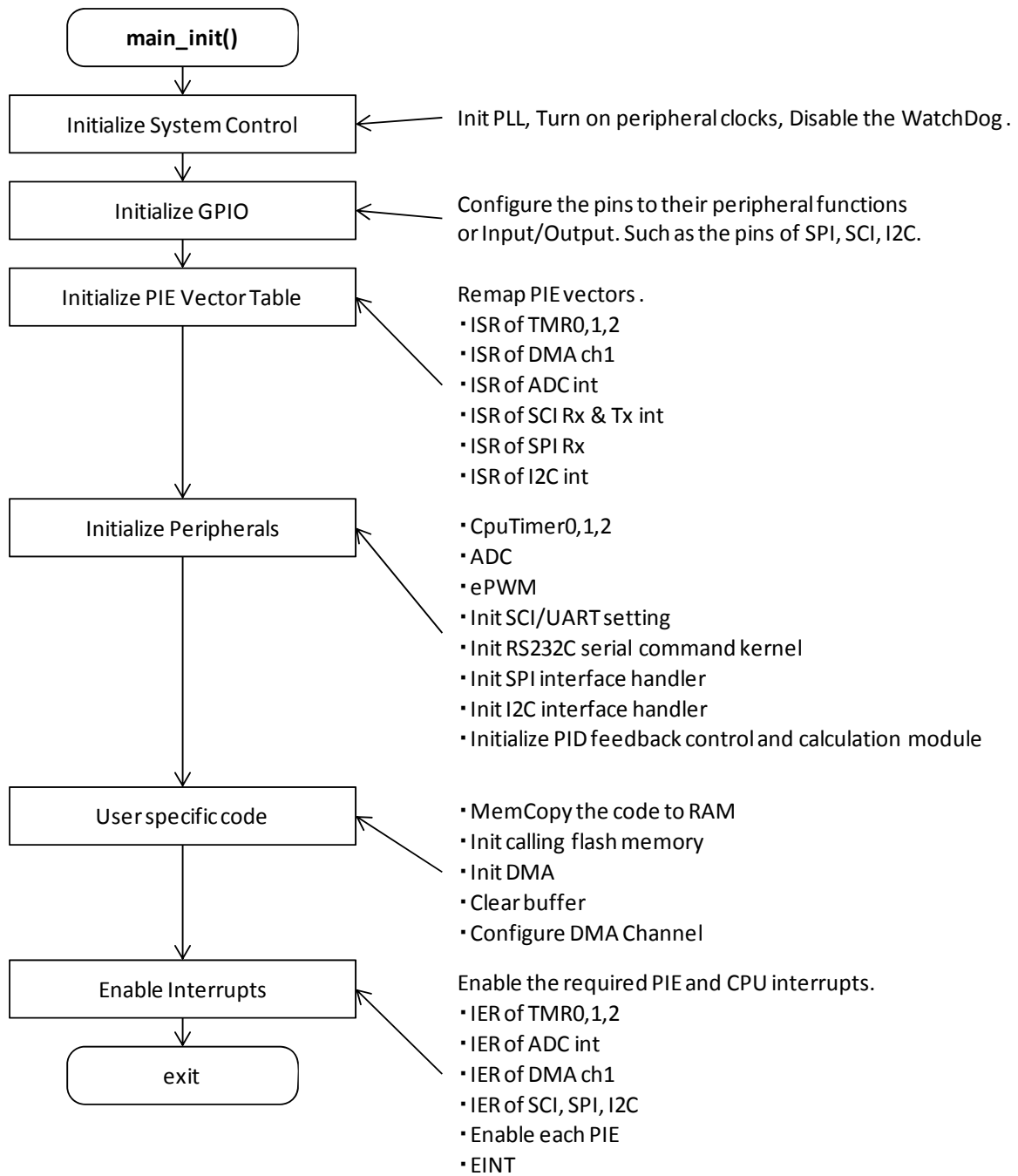


Fig.- 2 The flow of main_init()

2. State transition diagram at main() loop routine

You can configure any state transitions with a wide variety of the combinations such as Fig-3.

For example, you can configure the state transitions of sequence mode such as Fig-4.

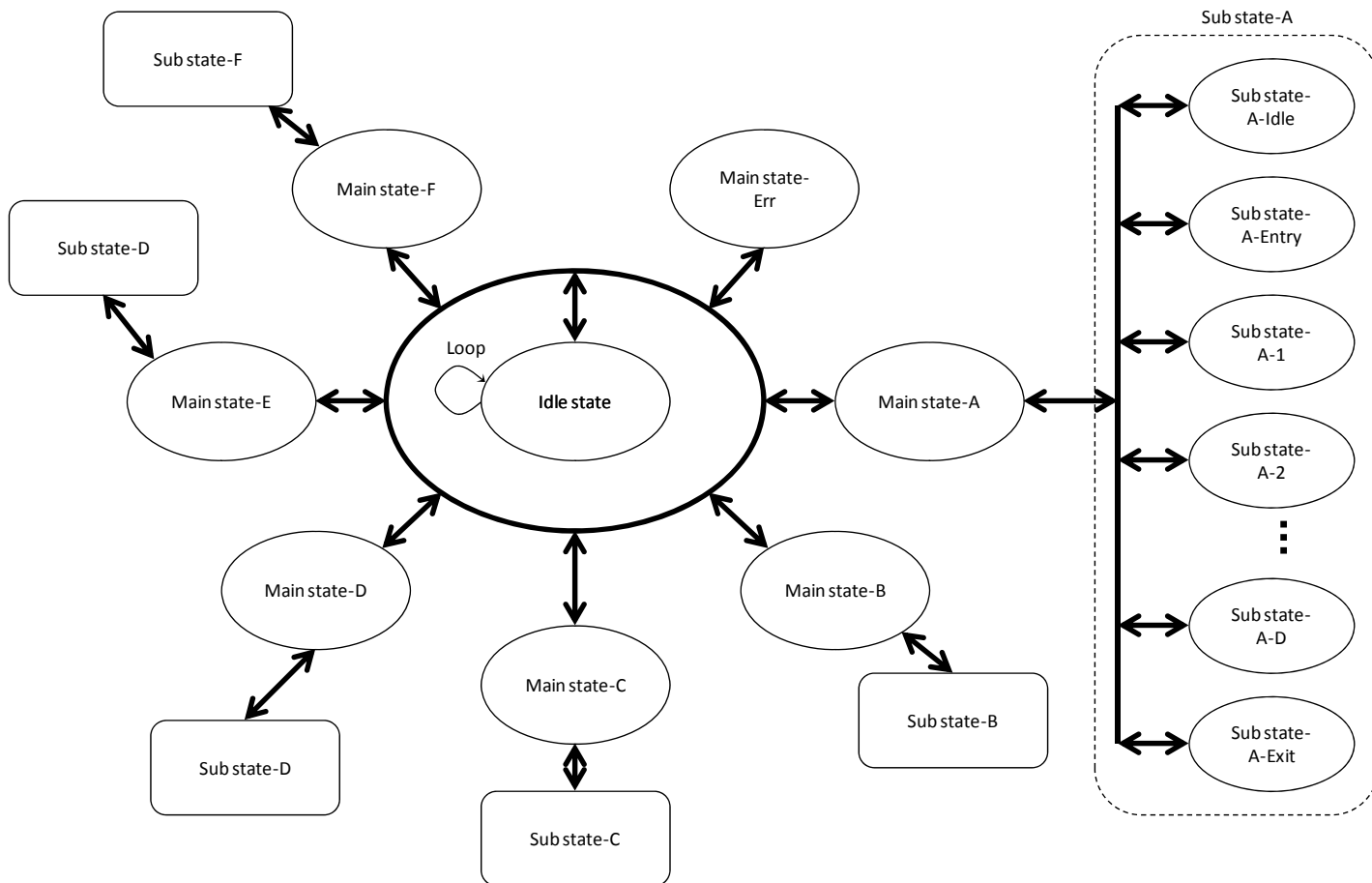


Fig.- 3 State transition diagram at main() loop routine

3. The configurations of the periodical Interrupt Service Routine(ISR)

The periodical ISRs consist of the peripherals such as Timer0,1,2 interrupt, ePWM interrupt with the ADC & the DMA. See the Fig-5. The setting values of ePWM are noted below. It is shown the state transition diagram at Timer0,1,2 Interrupt Service Routine in Fig-6.

Table- 1 The setting values of ePWM

SYSCCLKOUT	150	MHz	6.7	ns
CLKDIV	1		-	
HSPCLKDIV	2		-	
TBCLK	75	MHz	13.3	ns
TBPRD	150	DEC	96	HEX
Twpm	0.50	MHz	2013	ns

Here, the formula of ePWM setting are

$$TBCLK = \frac{SYSCLKOUT}{HSPCLKDIV \times CLKDIV}$$

$$T_{PWM} = (T_{BPRD} + 1) \times T_{TBCLK}$$

$$f_{PWM} = \frac{1}{T_{PWM}}$$

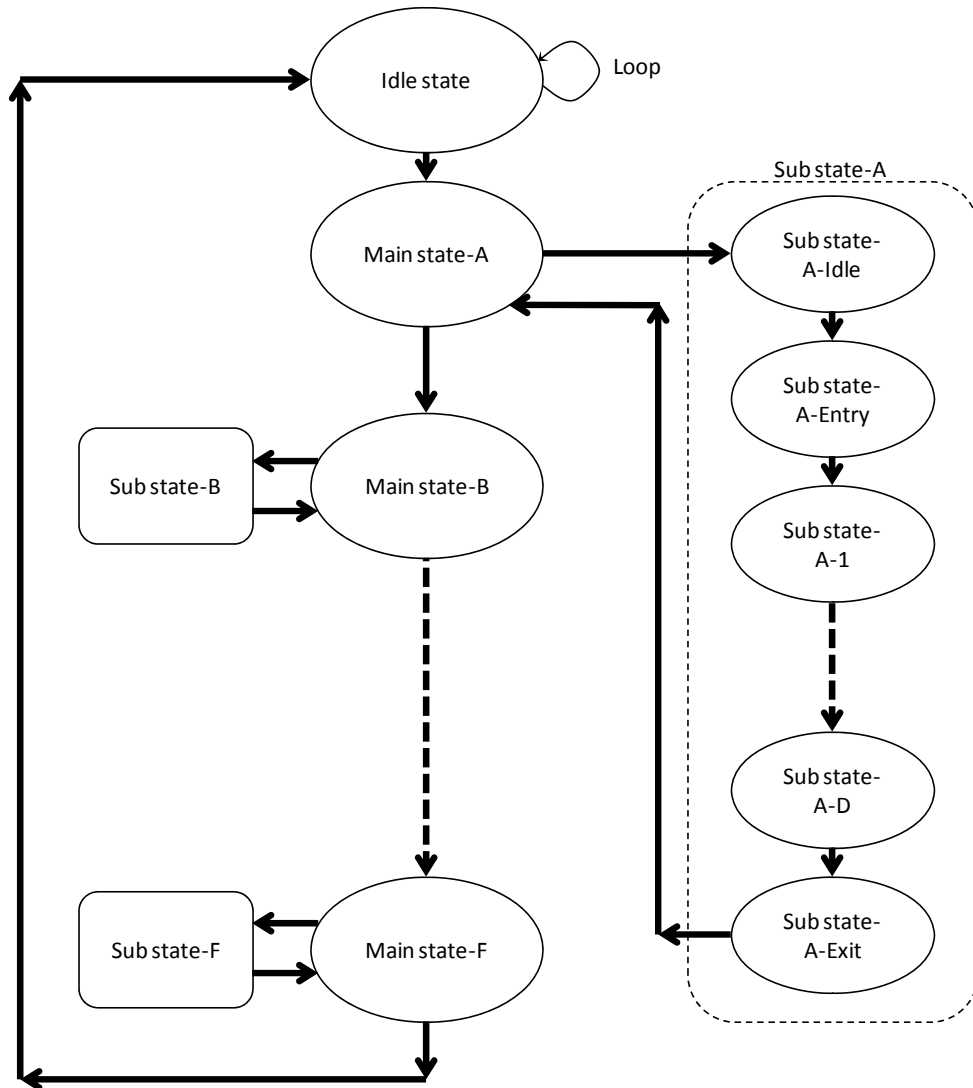


Fig.- 4 State transition diagram of sequence mode

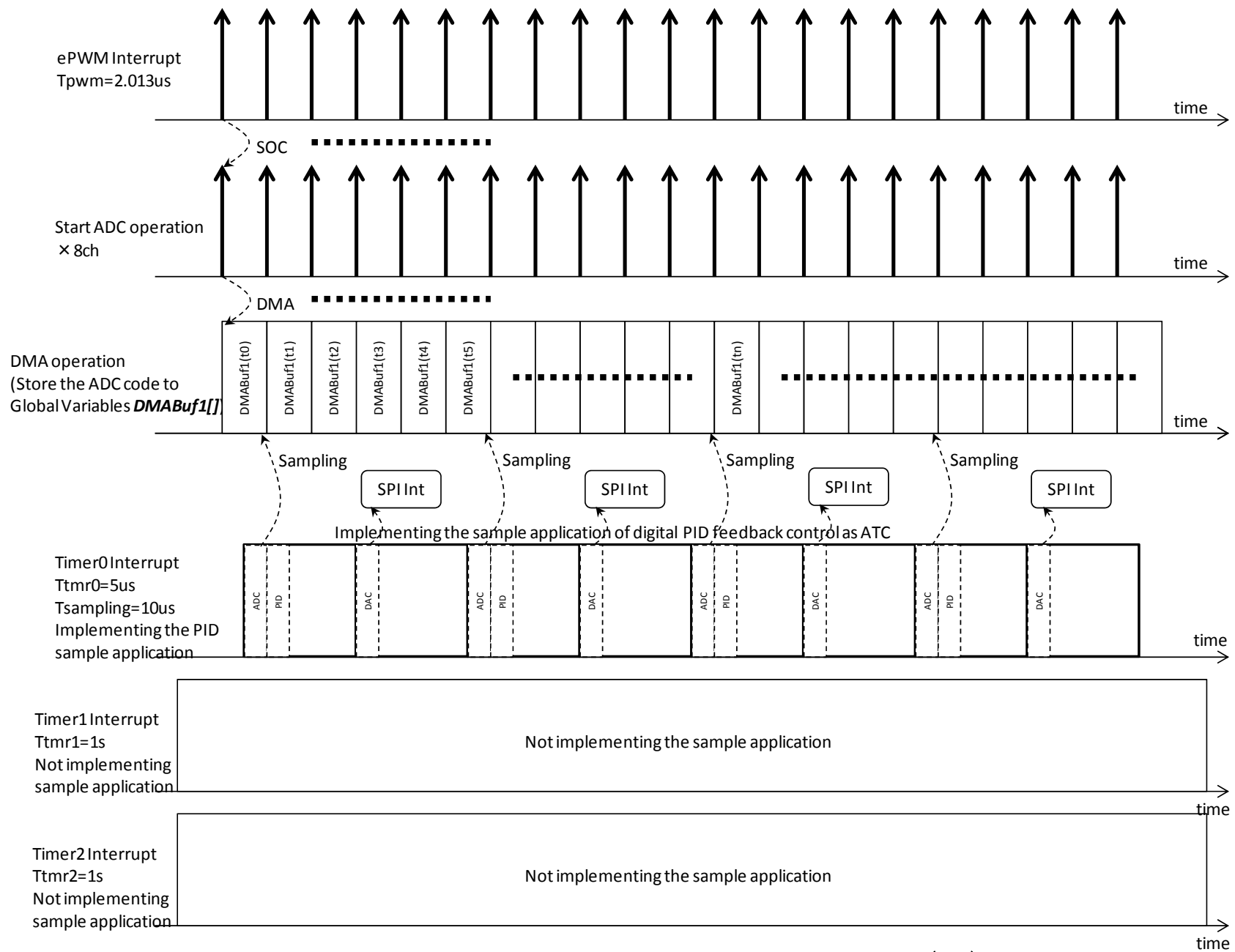


Fig.- 5 The configurations of the periodical Interrupt Service Routine(ISR)

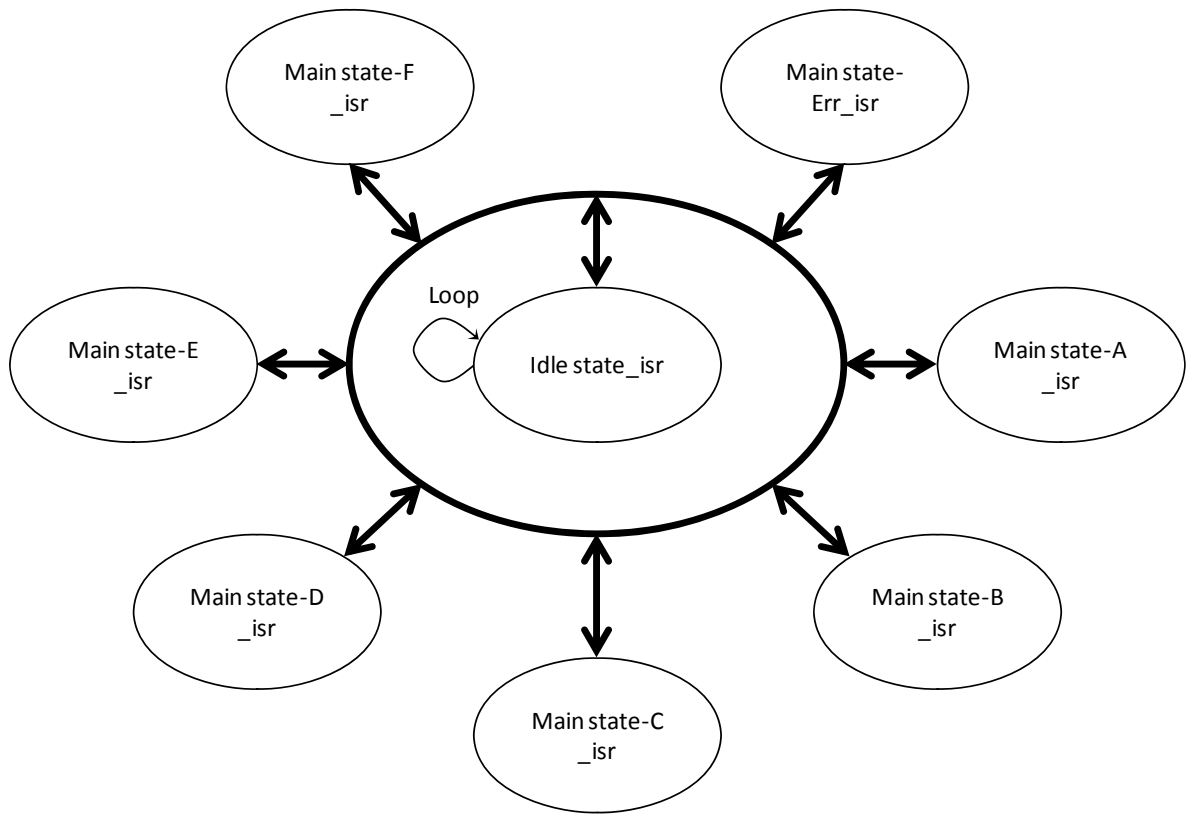


Fig.- 6 State transition diagram at Timer0,1,2 Interrupt Service Routine

