

## Application Note

### T32A IntervalTimer (T32A-C)

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### 1. Preface

This application note describes sample software for the interval timer function using the t32a driver.  
This document helps the user check operation of a product under development and develop its program.

### 2. Technical Term

Term/Abbreviation	Definition
BSP	Board Support Package
CG	Clock control and Operation Mode
Timer	T32A:32-bit Timer Event Counter

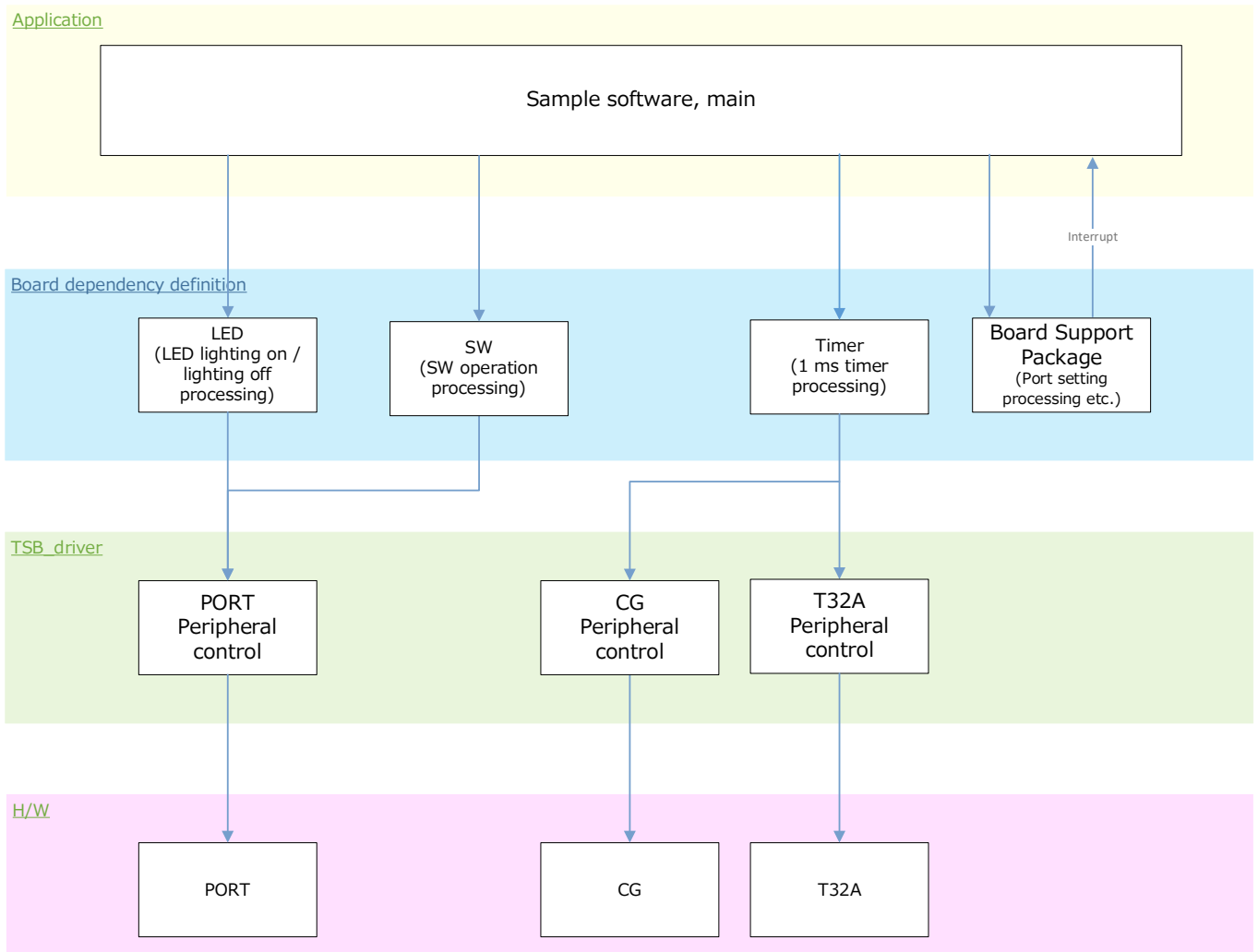
### 3. Reference Document

Document	Notes
Data sheet	Refer to the data sheet of MCU to be used.
Reference manual	Refer to the reference manual of each IP to be used.
Application note MCU User Guide	Refer to the MCU user guide to be used.

## 4. Target Sample Program

Sample Program	Outline
T32A_IntervalTimer	Sample program of T32A_IntervalTimer function

## 5. Configuration Diagram



## 6. Sample Program:T32A\_IntervalTimer

This sample software is software that repeats turn on and off the LED every second.

### 6.1. Outlines of Operation

Each time Timer\_A elapses, BSP\_LED\_1, BSP\_LED\_2, BSP\_LED\_3, and BSP\_LED\_4 are turn ON / OFF.  
 When BSP\_PSW\_1 is pressed, the LED turn off.  
 When BSP\_PSW\_2 is pressed, the LED blinks in 500ms cycles.

### 6.2. Function to Use

The functions to use are as follows:  
 For the Port assignment of each BSP channel, refer to the MCU user guide.

IP	Channel	Objective
T32A	BSP_T32A_TIMER_1	Interval timer
PORT(Push-Switch)	BSP_PSW_1	Event trigger
	BSP_PSW_2	Event trigger
PORT(LED)	BSP_LED_1	For operation check
	BSP_LED_1	For operation check
	BSP_LED_3	For operation check
	BSP_LED_4	For operation check

### 6.3. Interrupt to Use

Interrupt	Outlines
INTT32A00A	T32A Timer A Timer counter increment every 1ms for display update

### 6.4. Configuration

“main.c” configuration setting.

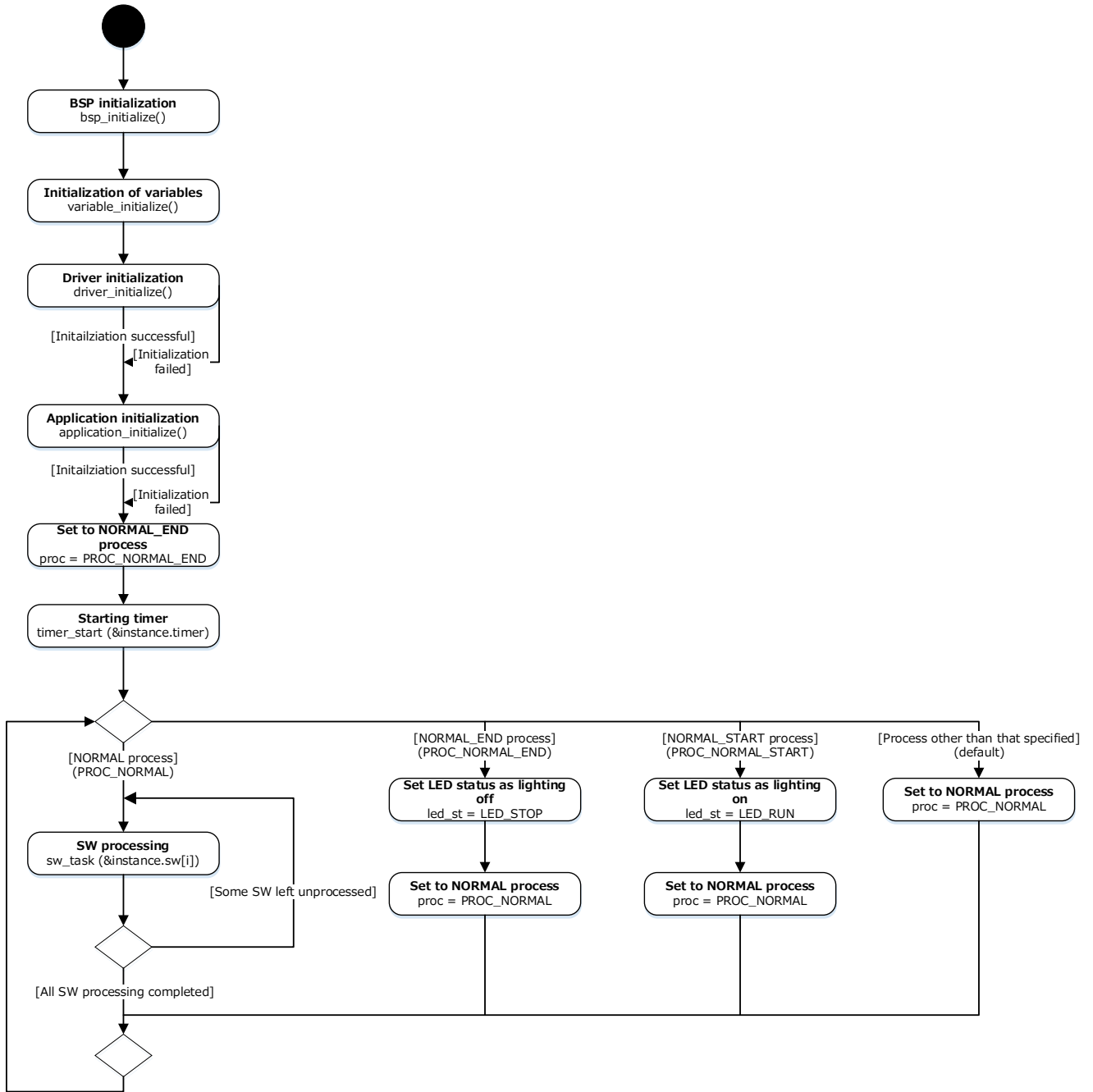
Configuration	Current Value	Description
Timer A	500ms	LED blinking cycle

### 6.5. Example of Terminal Emulator Output

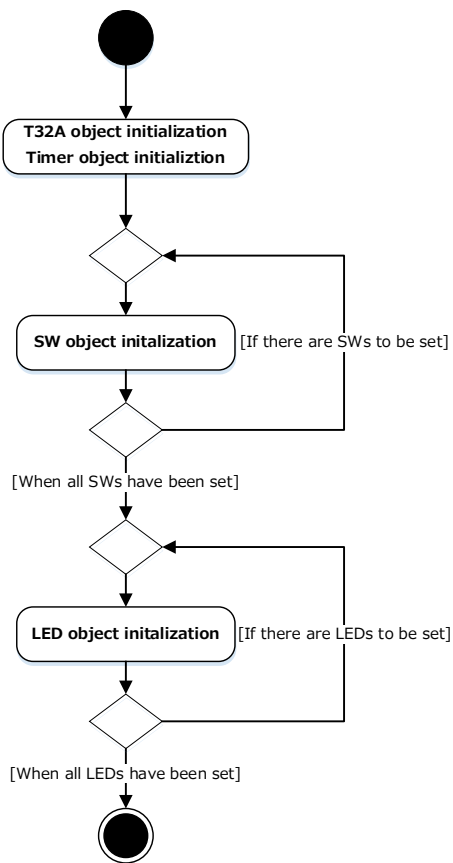
Nothing.

## 7. Activity diagram

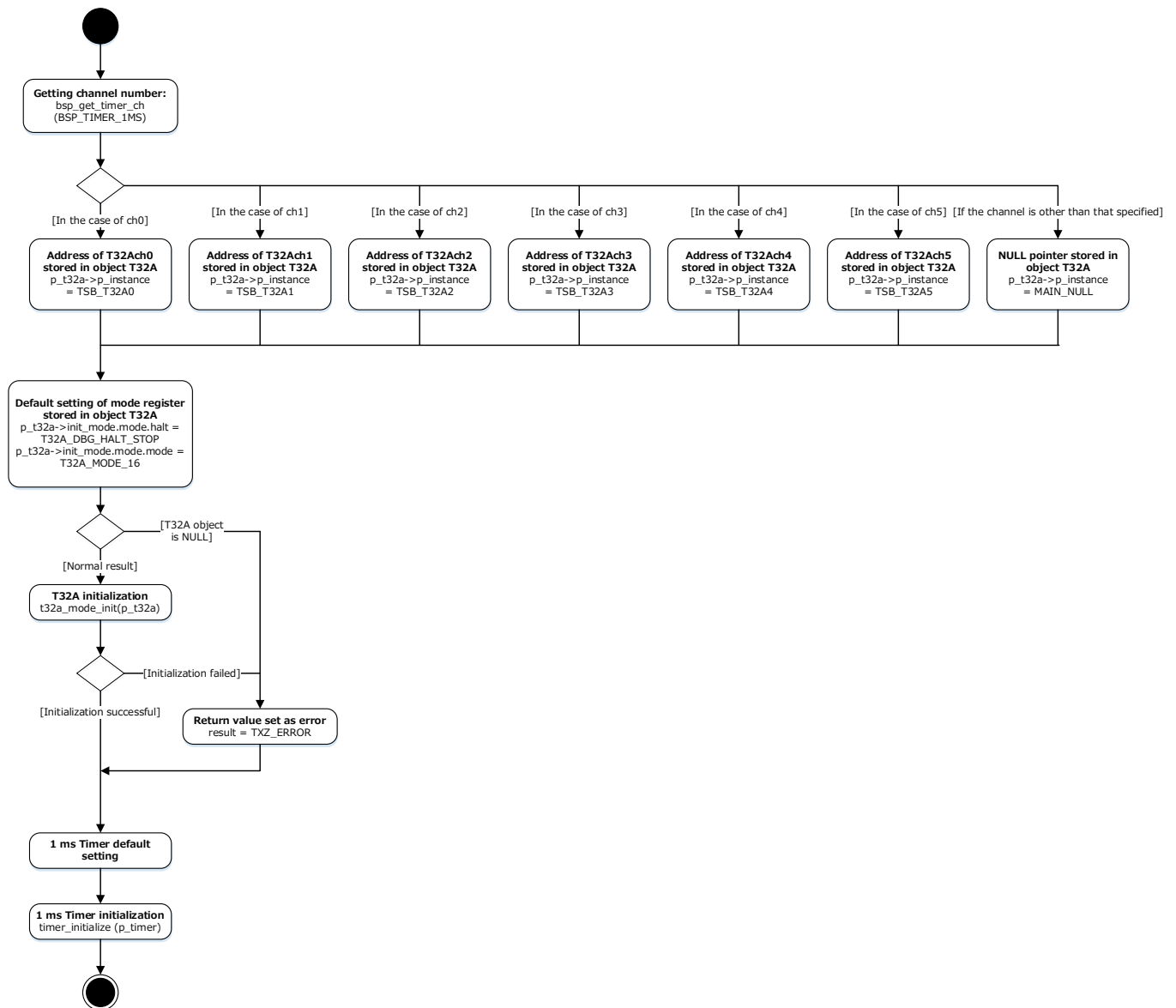
### 7.1. main



### 7.2. variable\_initialize

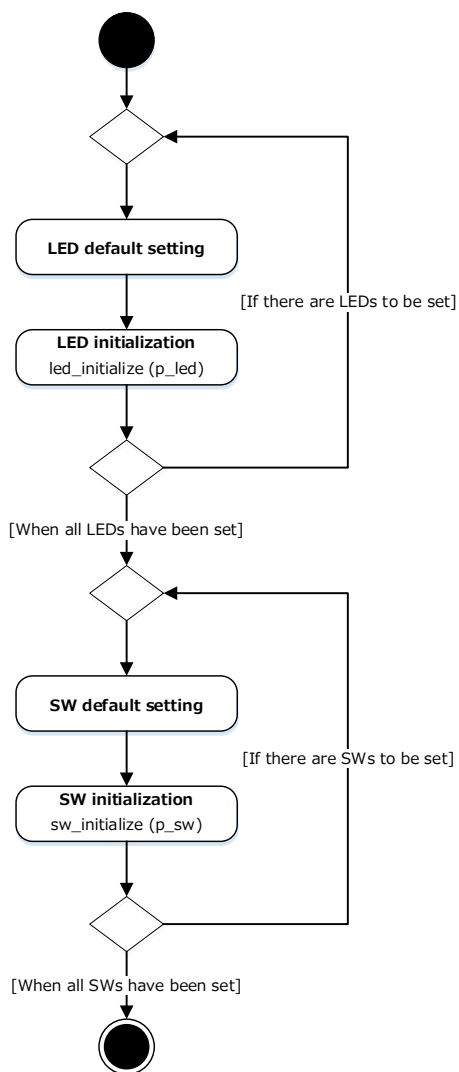


### 7.3. driver\_initialize

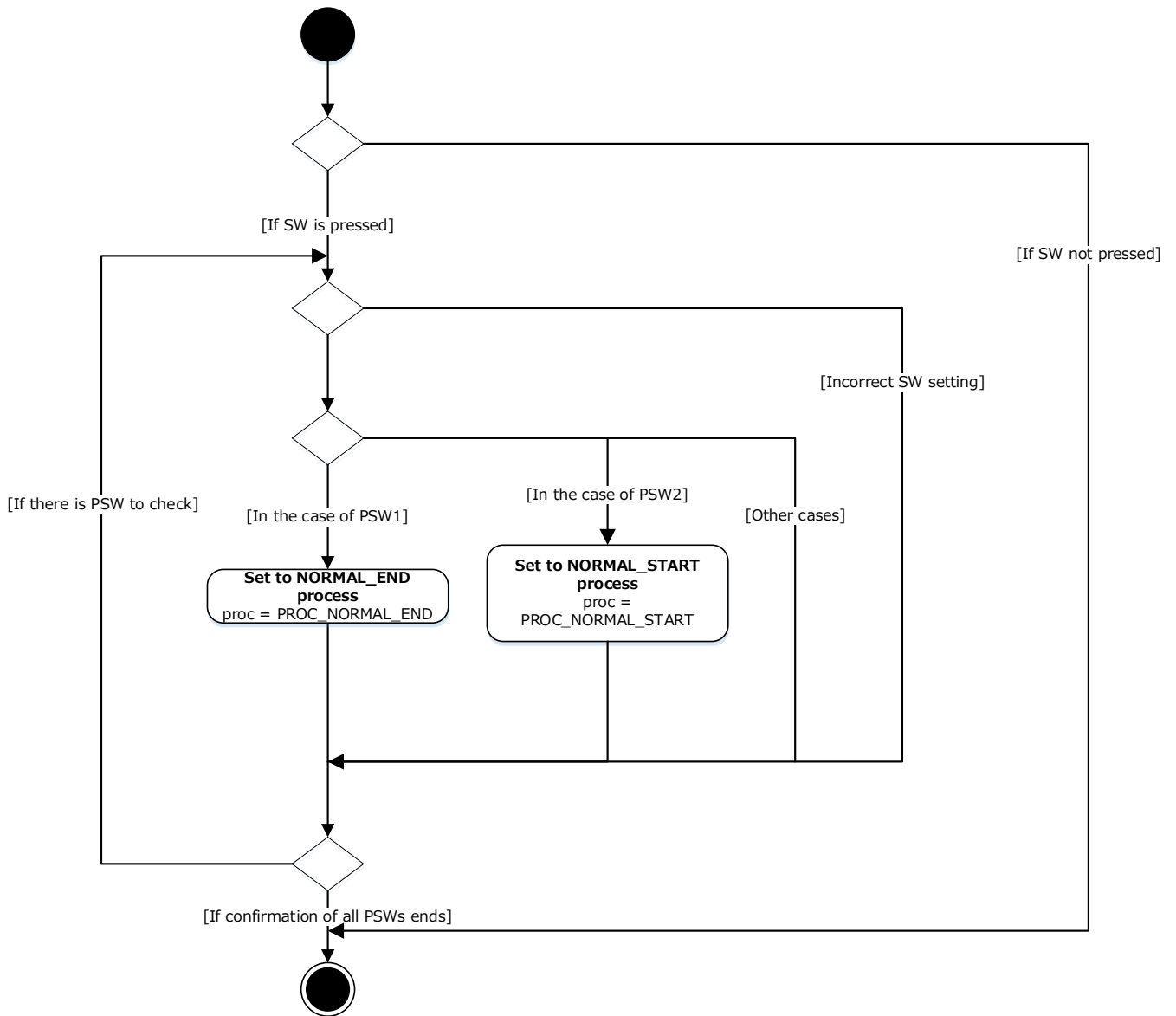




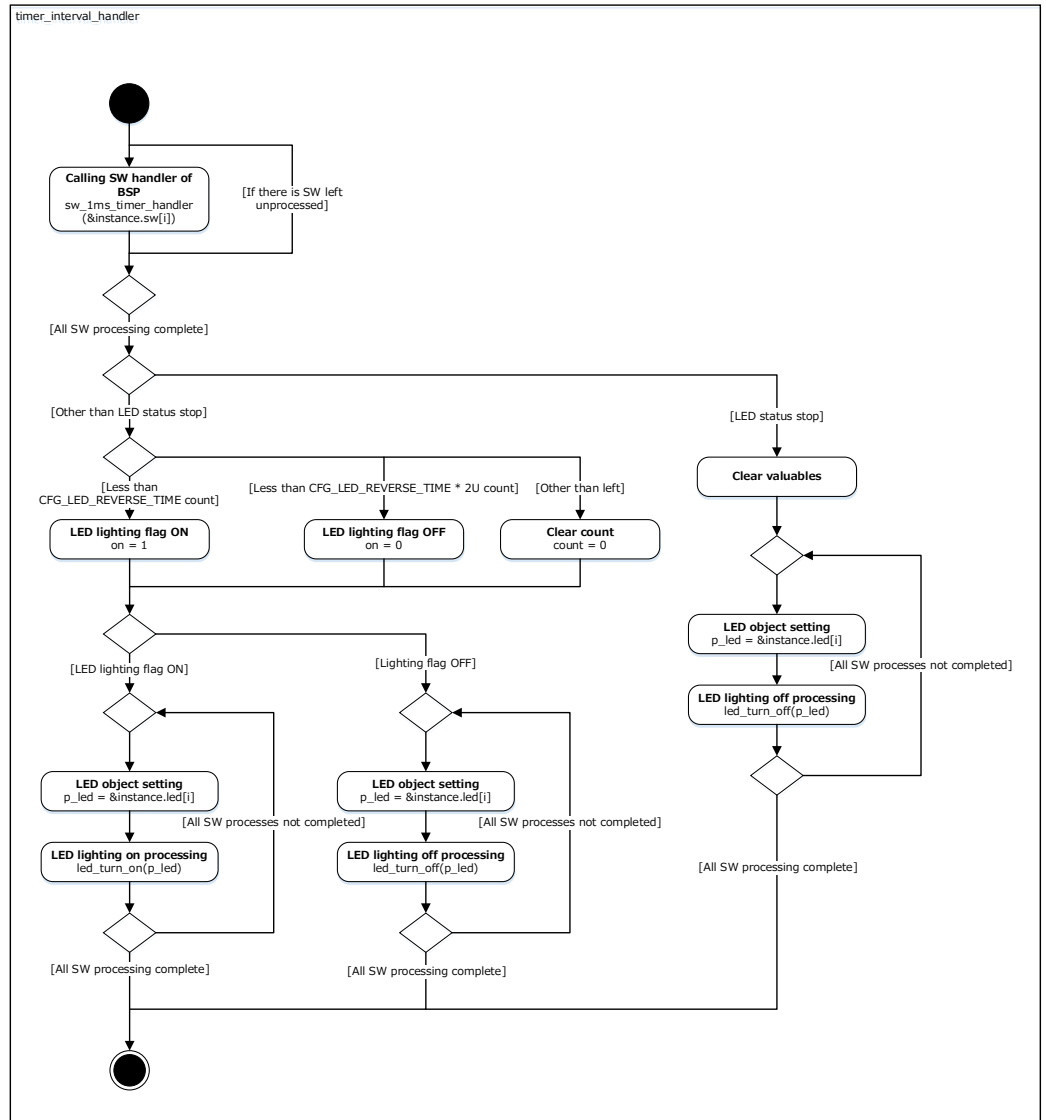
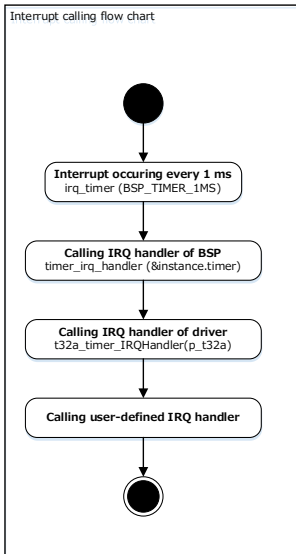
### 7.4. application\_initialize



### 7.5. sw\_state\_change\_handler



### 7.6. Interrupt



## 8. Revision History

Revision	Date	Description
1.0	2023-10-16	First release

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