

Application Note

TSPI_Flash

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1. Preface

This application note describes the sample software TSPI_ACCELEROMETER using Serial Peripheral Interface (TSPI).

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
TSPI	Serial Peripheral Interface
UART	Universal Asynchronous Receiver Transmitter
Timer	T32A: 32-bit Timer Event Counter

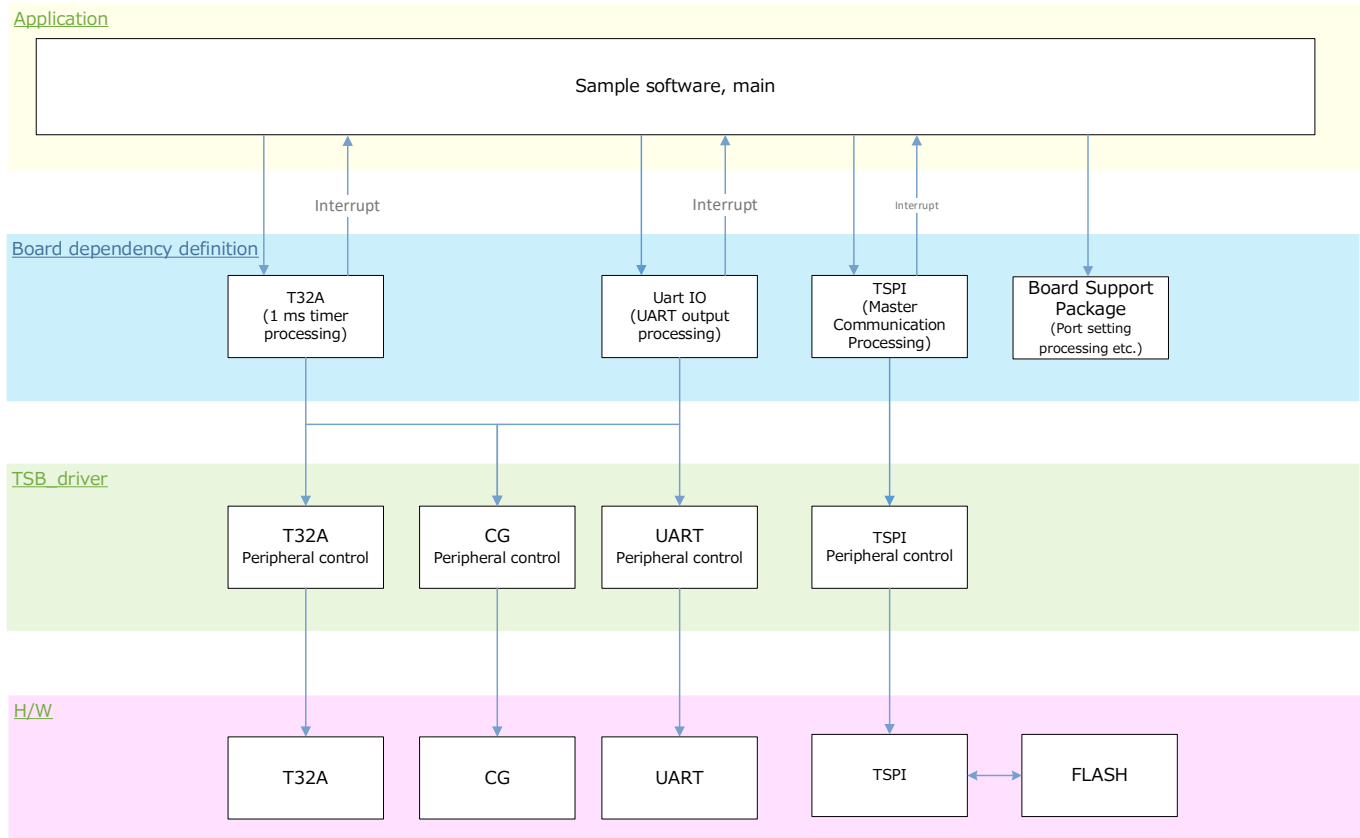
3. Reference Document

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.
Driver API List	Refer to the Doc folder

4. Target Sample Program

Sample Program	Outline
TSPI_Flash	Sample Program for the TSPI Function (Communication with SPI Flash)

5. Configuration Diagram



6. Sample Program: TSPI_Flash

This is a sample software that uses the SPI communication function to communicate with an SPI Flash device. Command execution results are displayed in hexadecimal format.

6.1. Outlines of Operation

When a command is input from the terminal software, the corresponding operation is performed.

Command	Formart	Outline
write	write string	Writes the character string specified by the command, followed by 0x00.
read	read	Reads the string written immediately before.

6.2. Function to Use

The functions to use are as follows:

For the Port assignment of each Channel, refer to the MCU user guide.

IP	Channel	Objective
TSPI	BSP_TSPI_2	SPI communication
UART	BSP_UART_1	Terminal soft communication

6.3. Interrupt to Use

For details, please refer to the "Interrupt List by Sample" in the MCU User's Manual.

6.4. Configuration

Configuration setting.

Configuration	Soft Definition Name	Current Value (Defaults)	Description
Write DATA MAX.	BSP_WRITE_DATA_MAX	16	Maximum Number of Writable Characters
FLASH START ADDRESS	BSP_FLASH_START_ADDRESS	0x00000000	Start address of FLASH data

6.5. Example of Terminal Emulator Output

6.5.1. Normal

◆ write command

```
command > write testdata  
write data > testdata
```

◆ read command

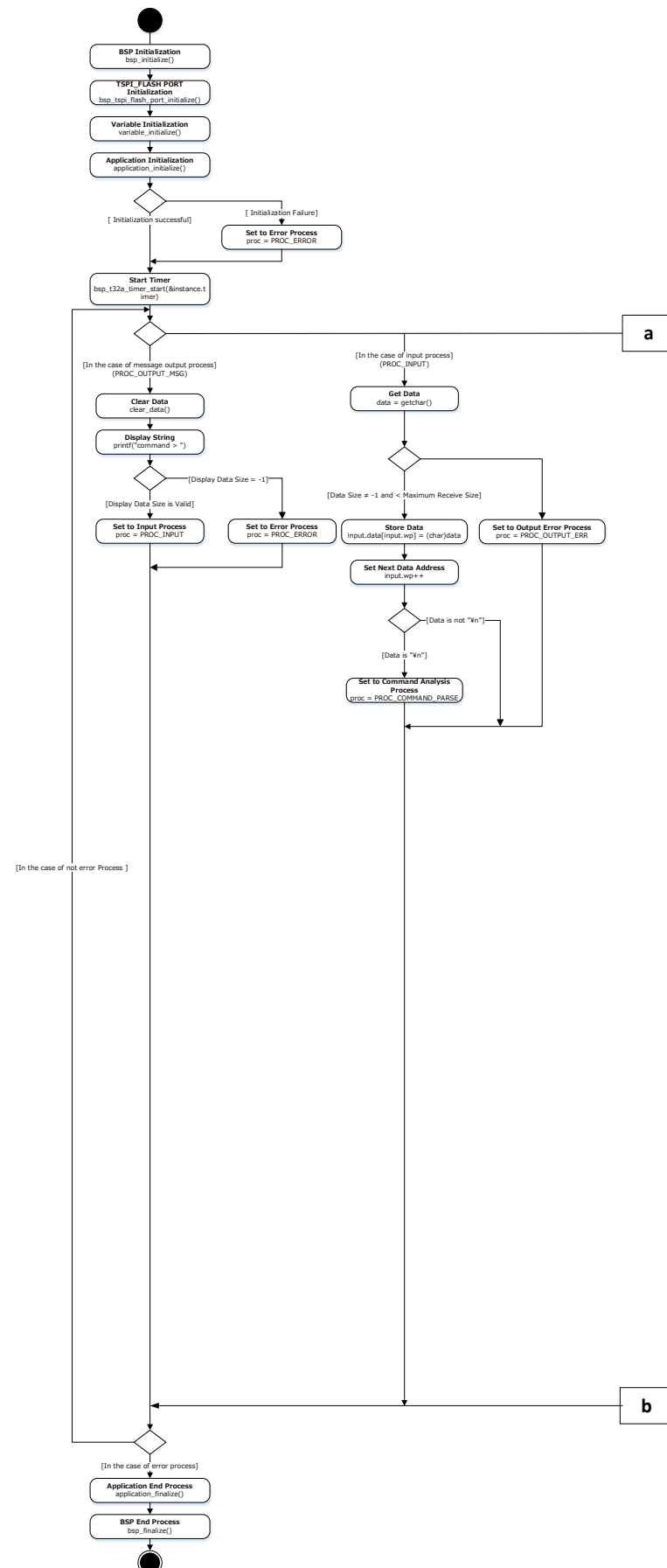
```
command > read  
read data > testdata
```

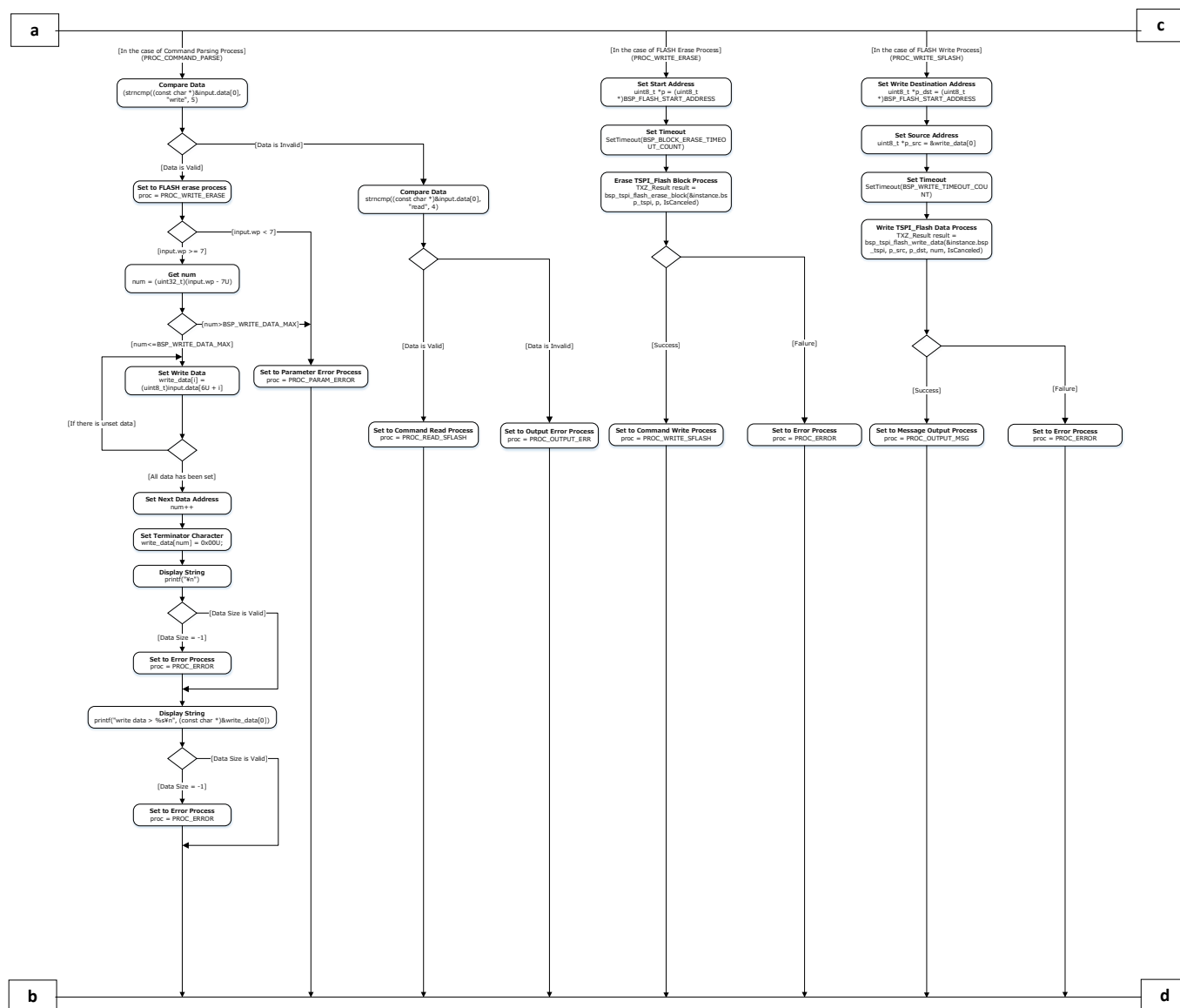
6.5.2. Error

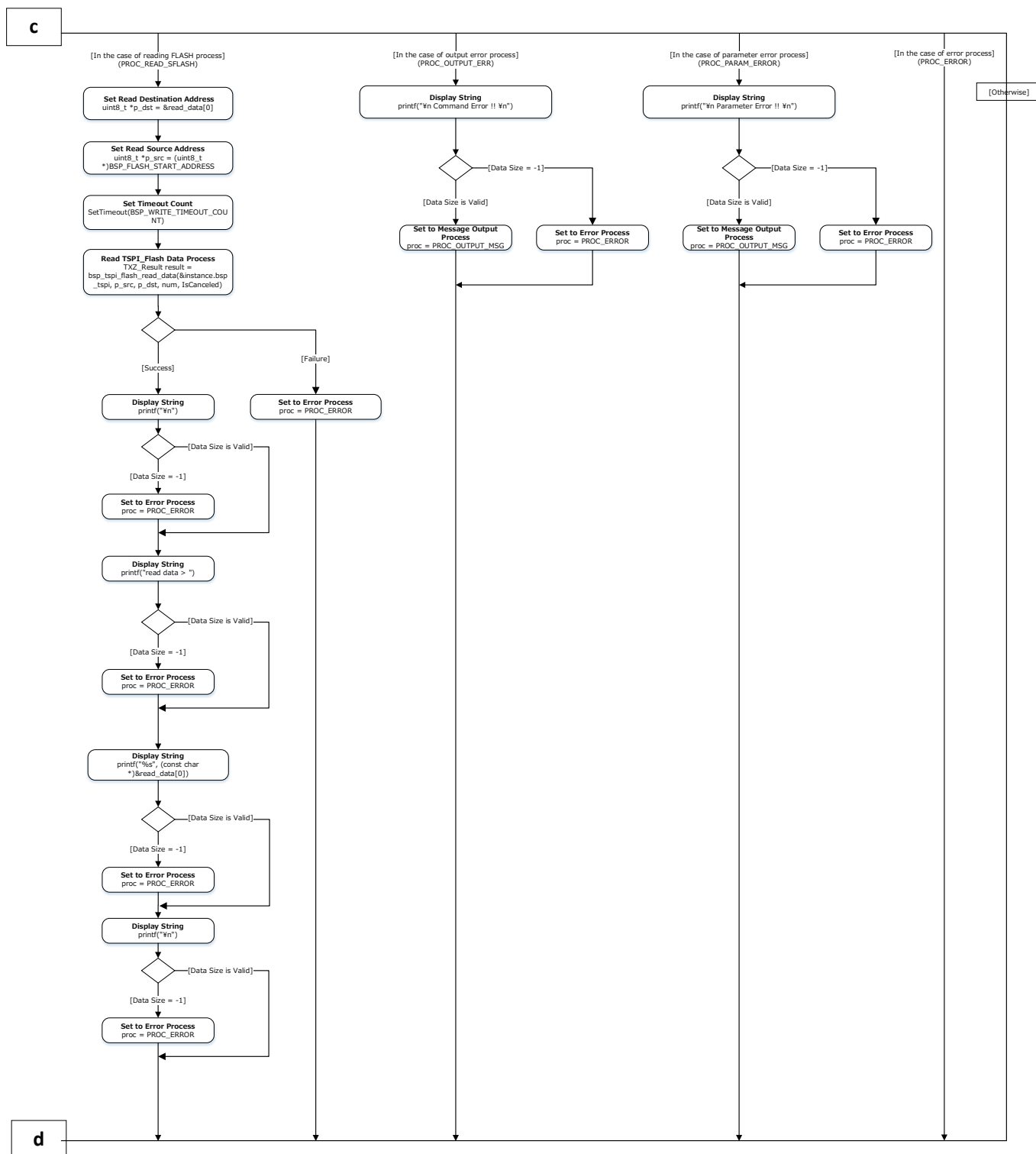
```
command > testdata  
Command Error!!  
command > write testdatatestdatatestdata  
Parameter Error!!
```

7. Activity diagram

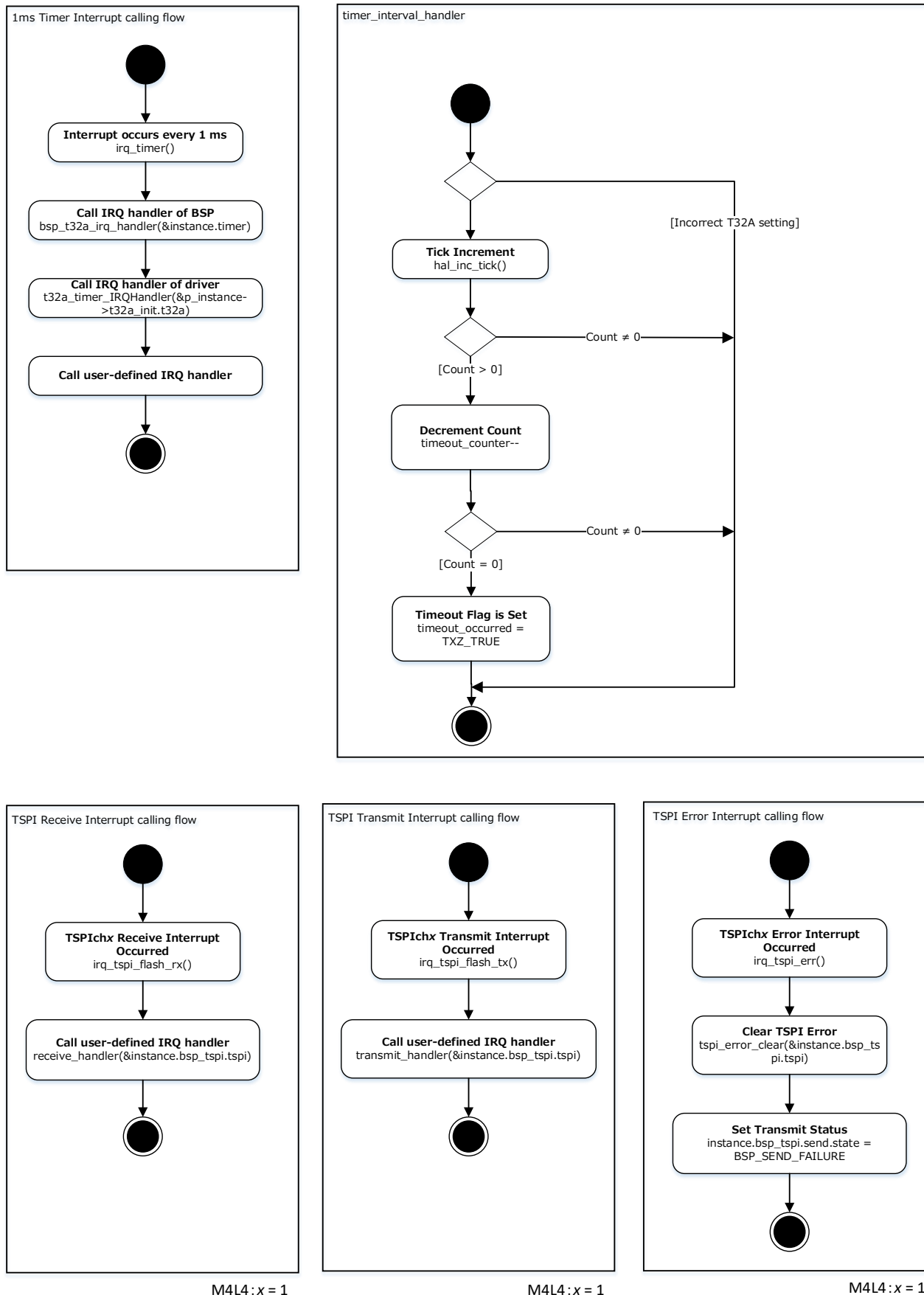
7.1. main







7.2. Interrupt

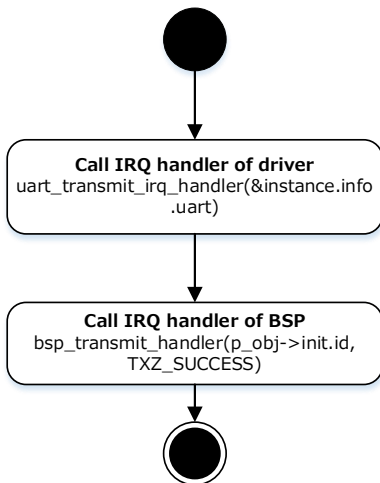


M4L4: x = 1

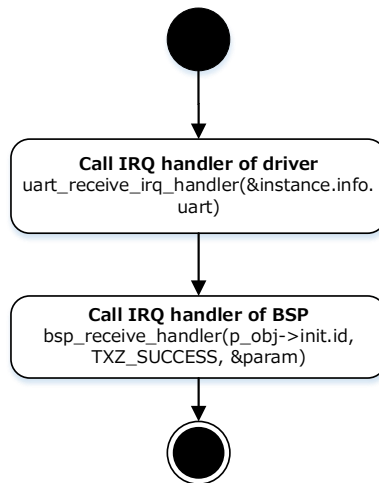
M4L4: x = 1

M4L4: x = 1

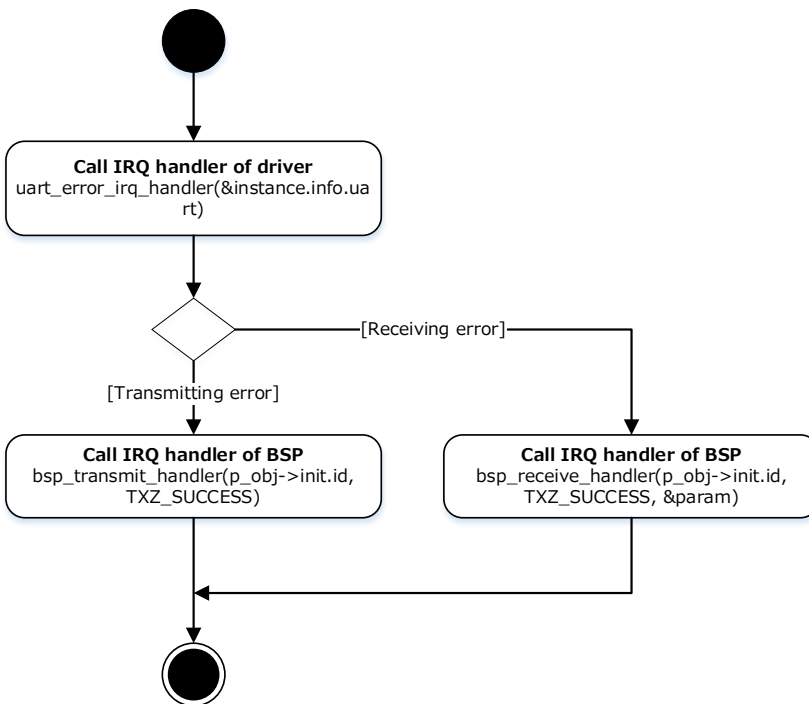
UART TX Interrupt calling flow



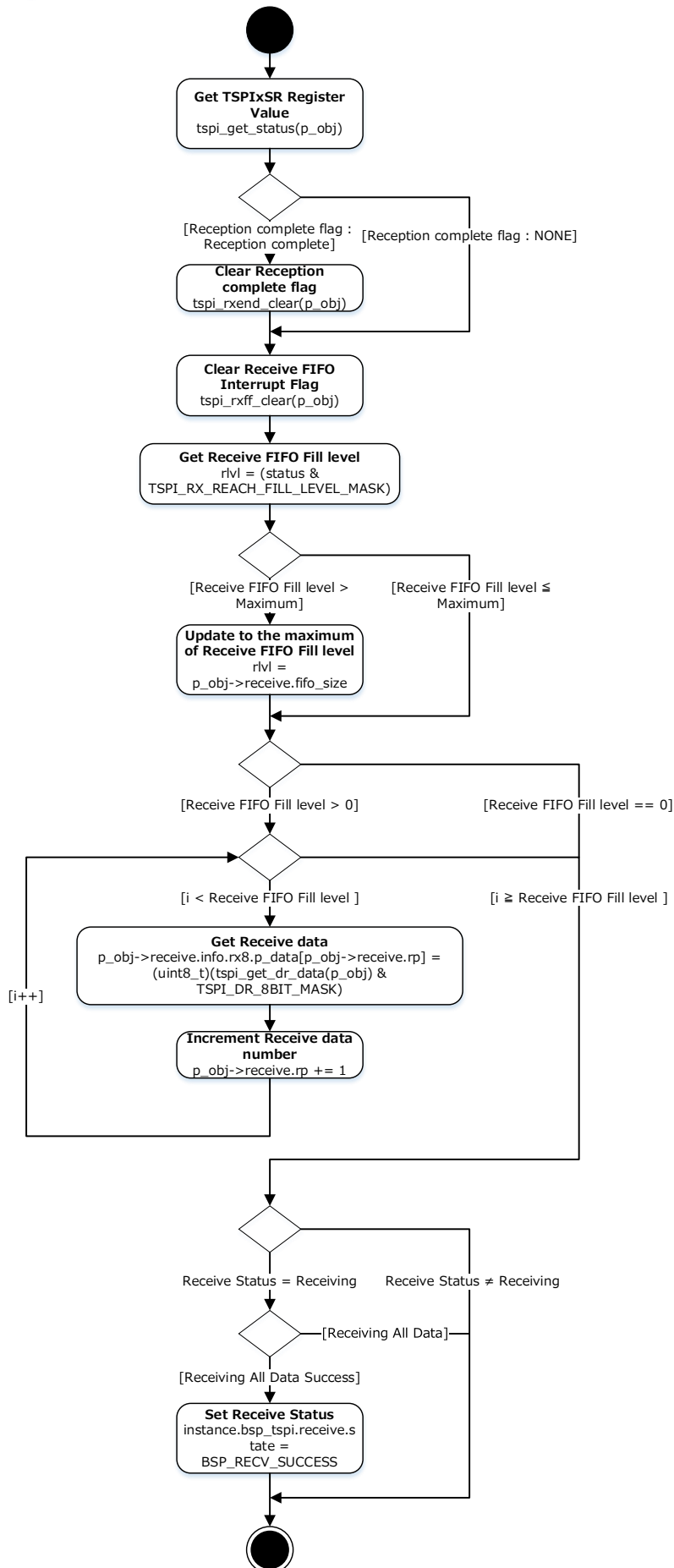
UART RX Interrupt calling flow

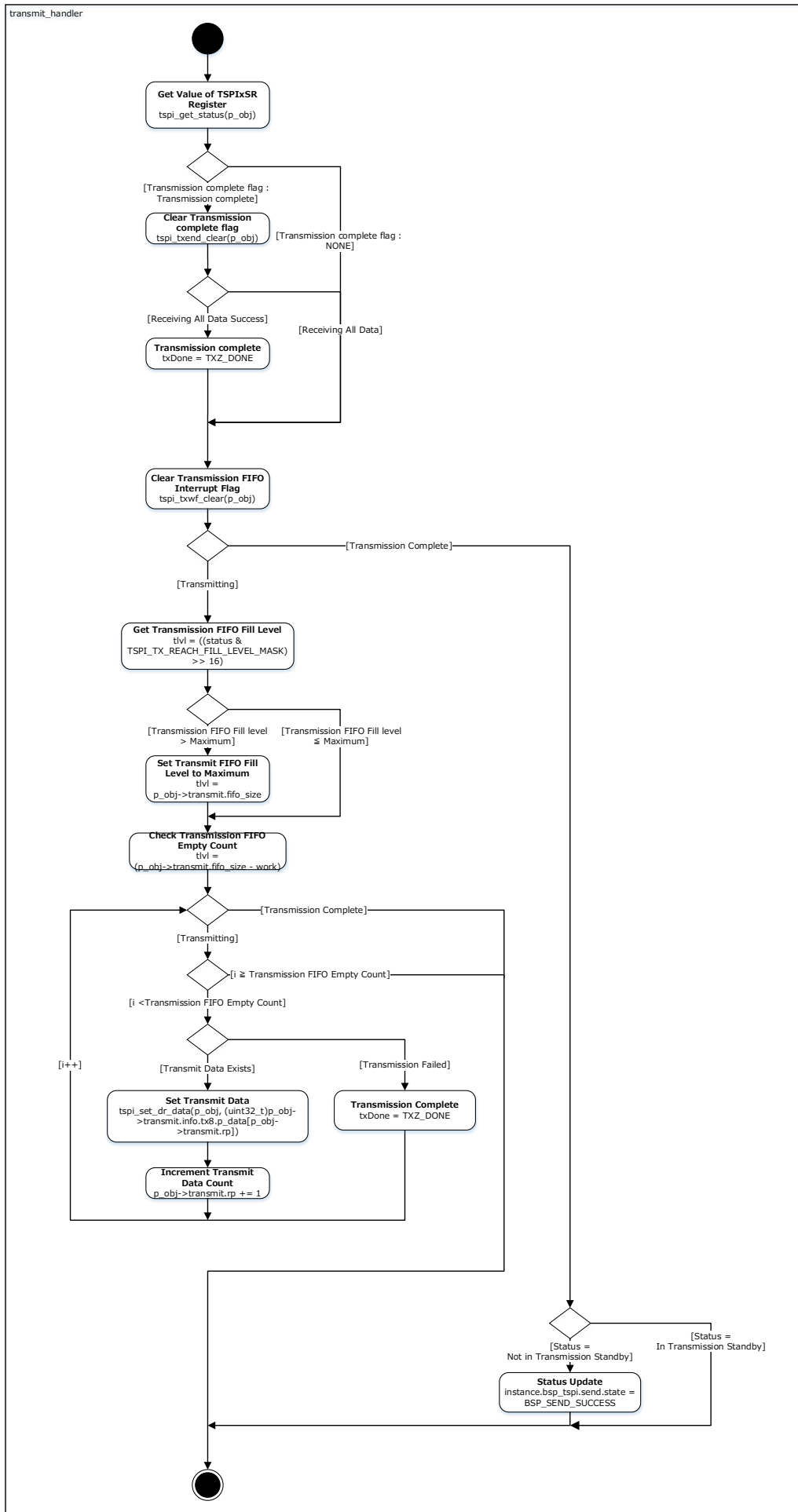


UART Communication Error Interrupt calling flow



receive_handler





8. Revision History

Revision	Date	Description
1.0	2026-07-30	First release

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