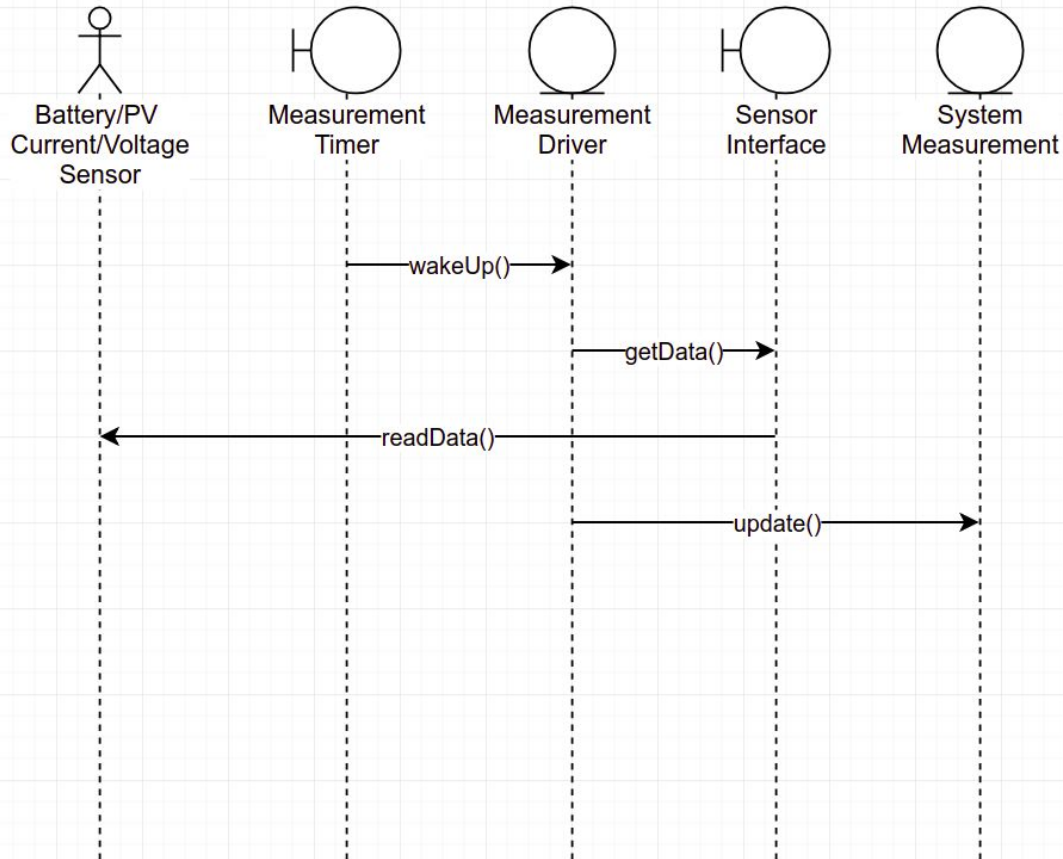# Sequence Diagrams

Current/Voltage Measurement

BASIC COURSE:

The Measurement Timer expires and wakes-up the Measurement Driver. The Measurement Driver reads values from the Sensor Interface. The Sensor Interface relays data from the Battery Current Sensor, Battery Voltage Sensor, PV Current Sensor, and PV Voltage Sensor. The Measurement Driver stores the recorded values in a System Measurement.
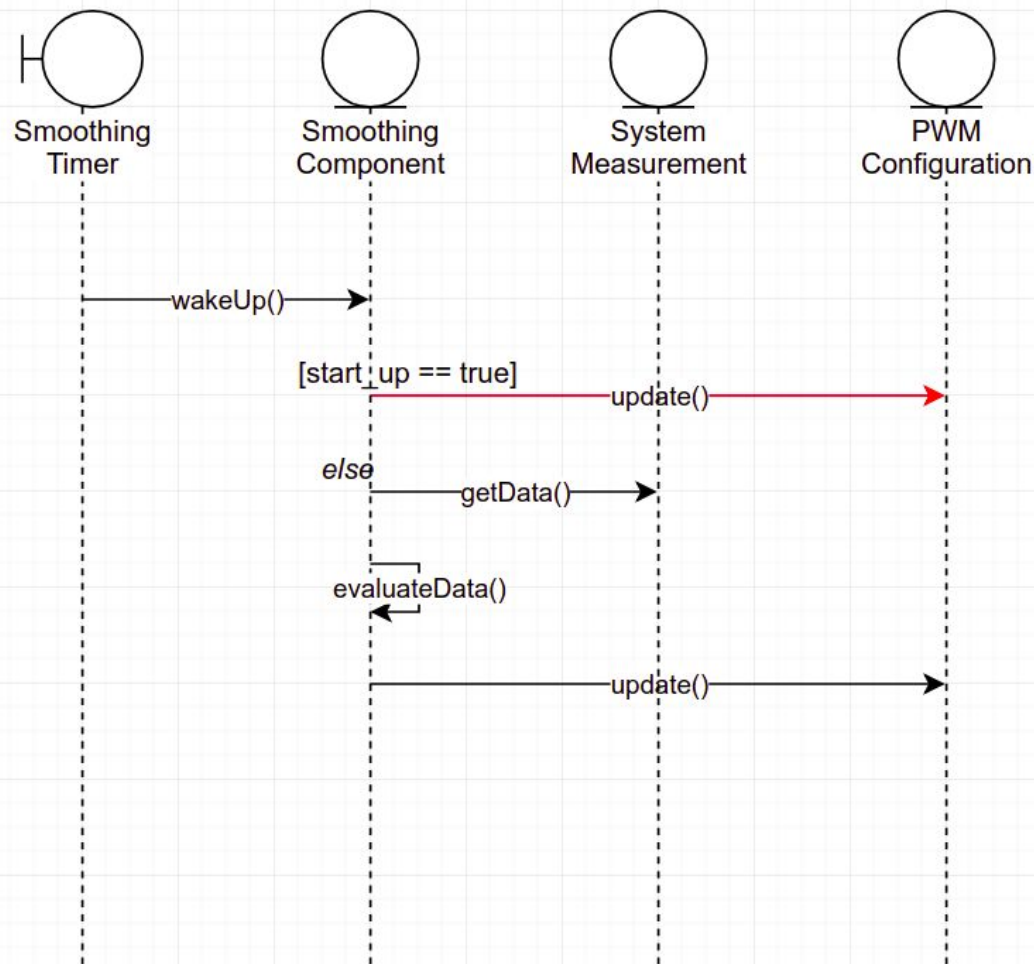
ALTERNATE COURSES:

N/A

Battery/PV Current/Voltage Sensor	Measurement Timer	Measurement Driver	Sensor Interface	System Measurement

— wakeUp() → (Measurement Timer to Measurement Driver)

— getData() → (Measurement Driver to Sensor Interface)

← readData() — (Sensor Interface to Battery/PV Current/Voltage Sensor)

— update() → (Measurement Driver to System Measurement)

Smoothing Decision

BASIC COURSE:
The Smoothing Timer expires and wakes-up the Smoothing Component. The Smoothing Component querrys the most recent System Measurement. The Smoothing Component evaluates the System Measurement data and sets the next PWM Configuration.

ALTERNATE COURSES:
System Start-Up: When the system is starting up, the Smoothing Component will use default values to set the PWM Configuration and will not read the System Measurement.

Smoothing Timer	Smoothing Component	System Measurement	PWM Configuration

wakeUp()

[start up == true] update()

else getData()

evaluateData()

update()

PWM Output Update

BASIC COURSE:
The PWM Timer expires and wakes-up the PWM Driver. The PWM Driver reads the PWM Configuration and loads it into the PWM Module.

ALTERNATE COURSES:

N/A

PWM Timer

PWM Driver

PWM Configuration

PWM Module

—wakeUp()→

—getData()→

—update()→