## Test Plan 2

# Testing the Motion Sensor Signal Decoder

Description

The main feature of the web application is to detect signals from the motion detector and subsequently decode the signal with reference to a Morse code table. In this test we attempt to verify that the morse code decoder we have designed is working for the test by supplying it with a number of signal inputs. These inputs will be further described in a table below.

Setup

Using mocha and chai, we test the results of the functions getCharacter() and decode(). To run the test move to the directory called “unittest” and run the file called unitTest2 with:

$mocha unitTest2.js

Test cases

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| --- | --- | --- | --- | --- |
| **Test Case** | **Description** | **Inputs** | **Expected Result** | **Actual Result** |
| A regular string “THIS IS A HOAX” | The string “THIS IS A HOAX” is supplied to a function named morseSimulator(). This function turns the supplied string input an array of signals which is then passed to the decoding function to be decoded. | “THIS IS A HOAX” | “THIS IS A HOAX” | “THIS IS A HOAX” |
| Detecting a gap that has an invalid time | A gap in our program is defined as the time the current signal was stored minus the time the previous signal was stored. When a gap time that is not valid exists, the decoder should not attempt to decode that input and will exit early with an error. | A hard coded signal array with negative time gaps | Error: Signal interval time is not positive. | Error: Signal interval time is not positive. |
| Returning null when a signal input does not match any morse code entries | Sometimes the signals detected might not match any existing entries in the morse code table. When this happens the program will return a null. | A hard coded signal array that doesn’t match any morse character | null | null |
| Program exits with the message that has been build so far after detecting the first ‘SK’ | In morse code, a ‘SK’ character designates the end of a message. Therefore we feed the decoder signals with additional characters after a ‘SK’ character. | We passed the signals of the string [‘A’, ‘SK’,’SK’,’A’] to the decoder. | A | A |