

buttonHandler.h

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1 /*
2  * buttonHandler.h
3  *
4  * Created on: Jun 4, 2015
5  * Author: Taylor Cowley
6  */
7
8 #ifndef BUTTONHANDLER_H_
9 #define BUTTONHANDLER_H_
10
11 #include <stdint.h>
12 #include <stdio.h>
13 #include <stdbool.h>
14 #include "supportFiles/display.h"
15 #include "supportFiles/utils.h"
16 #include "simonDisplay.h"
17 #include "globals.h"
18
19
20 //This is how many ticks to let the touch sensor cool off before reading it
21 #define BUTTON_HANDLER_TOUCH_COOLDOWN GLOBALS_TOUCH_COOLDOWN
22
23 //states for our button handler state machine
24 enum buttonHandler_st_t {
25     init_st,           //inits our state machine
26     wait_for_enable_st, //we wait here until we are enabled
27     wait_for_touch_st,  //we are active and waiting for a button push
28     touch_ad_timer_st,  //we wait here for the touch sensor to cool
29     record_touch_st,    //We record where the button was touched
30     wait_for_release_st, //the button is being pushed
31     end_st,             //we finalize things
32     wait_for_disable_st //now we just wait to be disabled
33 };
34
35
36 // Get the simon region numbers. See the source code for the region numbering scheme.
37 uint8_t buttonHandler_getRegionNumber();
38
39 // Turn on the state machine. Part of the interlock.
40 void buttonHandler_enable();
41
42 // Turn off the state machine. Part of the interlock.
43 void buttonHandler_disable();
44
45 // Other state machines can call this function to see if the user has stopped touching the pad.
46 bool buttonHandler_releaseDetected();
47
48 // Standard tick function.
49 void buttonHandler_tick();
50
51 // This tests the functionality of the buttonHandler state machine.
52 // buttonHandler_runTest(int16_t touchCount) runs the test until
53 // the user has touched the screen touchCount times. It indicates
54 // that a button was pushed by drawing a large square while
55 // the button is pressed and then erasing the large square and
56 // redrawing the button when the user releases their touch.
57 void buttonHandler_runTest(int16_t touchCount);
```

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58  
59 #endif /* BUTTONHANDLER_H_ */  
60
```