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/*****
Module
  MasterTimerService.c

Revision
  1.0.1

Description
  This is a MasterTimer to keep track the duration of the game and will expire in 2 mins

Notes

History
When          Who          What/Why
-----
01/16/12 09:58 jec          began conversion from MasterTimerFSM.c
*****/
/*----- Include Files -----*/
/* include header files for this state machine as well as any machines at the
   next lower level in the hierarchy that are sub-machines to this machine
*/
#include "ES_Configure.h"
#include "ES_Framework.h"
#include "MasterTimerService.h"
#include "CommandSM.h"
#include "ME218_E128.h"

/*----- Module Defines -----*/
#define HeartBeatInterval 250
#define TotalBeats 500

/*----- Module Functions -----*/
/* prototypes for private functions for this service.They should be functions
   relevant to the behavior of this service
*/

/*----- Module Variables -----*/
// with the introduction of Gen2, we need a module level Priority variable
static uint8_t MyPriority;
static char FirstTimeOut = 1;

/*----- Module Code -----*/
/*****
Function
  InitMasterTimerService

Parameters
  uint8_t : the priority of this service

Returns
  boolean, False if error in initialization, True otherwise

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Description

Saves away the priority, and does any other required initialization for this service

Notes

Author

J. Edward Carryer, 01/16/12, 10:00

```
*****/  
boolean InitMasterTimerService ( uint8_t Priority )  
{  
    ES_Event ThisEvent;  
  
    MyPriority = Priority;  
    ThisEvent.EventType = ES_INIT;  
    ES_Timer_InitTimer (MasterTimer,HeartBeatInterval);  
    DDRU l=BIT4HI; //PU4 of the Heart beat indicator of the game in  
progress  
    if (ES_PostToService( MyPriority, ThisEvent) == True)  
    {  
        return True;  
    }else  
    {  
        return False;  
    }  
}
```

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Function

PostMasterTimerService

Parameters

EF_Event ThisEvent ,the event to post to the queue

Returns

boolean False if the Enqueue operation failed, True otherwise

Description

Posts an event to this state machine's queue

Notes

Author

J. Edward Carryer, 10/23/11, 19:25

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*****/  
boolean PostMasterTimerService( ES_Event ThisEvent )  
{  
    return ES_PostToService( MyPriority, ThisEvent);  
}
```

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```

Function

RunMasterTimerService

Parameters

ES_Event : the event to process

Returns

ES_Event, ES_NO_EVENT if no error ES_ERROR otherwise

Description

add your description here

Notes

Author

J. Edward Carryer, 01/15/12, 15:23

*****/

ES_Event RunMasterTimerService(ES_Event ThisEvent)

{

static int BeatsNum =0;

ES_Event ReturnEvent,TimeOutEvent;

ReturnEvent.EventType = ES_NO_EVENT; // assume no errors

if (ThisEvent.EventType == ES_TIMEOUT)

{

if(BeatsNum <= TotalBeats) //the indicator will show 500 beats with a
frequency of 4Hz, in 2 min

{

PTU^=BIT4HI;

BeatsNum++;

}

else

{

TimeOutEvent.EventType = ES_MASTER_TIMEOUT;

PTU &=(~BIT4HI);

PostCommandSM(TimeOutEvent); //if the Timer expired, send the

timeout to the commandSM and shut down the bot

}

}

return ReturnEvent;

}

private functions

*****/

/*----- Footnotes -----*/

/*----- End of file -----*/