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/*
 * Name:                bcm_rpgm.c
 * Author:              Schupbach
 *
 * Description:
 *      "Main" for creation of reprogramming build.
 *  This version however is used as part of a Boot Swap Utility.
 */
#ifdef RPGM_BUILD

#include "hwlbltyp.h"

/*
 * These are defined as global variables, so they may be
 * accessed in the debugger.
 */
BYTE Ve_y_EraseStatus;
BYTE Ve_y_WriteStatus;

void main(void)
{
    WORD Le_i_Index;
    LONGWORD Le_g_Length;
    LONGWORD Le_g_Source;
    LONGWORD Le_g_Destination;

    /* Initialize to undetermined. FLASH_SUCCESS == 0, FLASH_FAILURE == 1 */
    Ve_y_EraseStatus = 5;
    Ve_y_WriteStatus = 6;

    /* Call the required init function before erasing. */
     InitHWIO_Flash();

    /*
     * Erase the existing BootLoader, block-by-block.
     * Boot occupies 0x0000 thru 0x3FFF (i.e. 16kB).
     * for the NEC micro, each block is 4096 bytes (i.e. 4kB),
     * so there are a total of 4 blocks occupied by Boot.
     *
     */
    for (Le_i_Index=0;Le_i_Index<4;Le_i_Index++)
    {
        Ve_y_EraseStatus = EraseHWIO_FlashBlock(Le_i_Index);
    }

    /* Erase cal presence pattern */
    EraseHWIO_FlashBlock((WORD)0x100);
    /* Erase app presence pattern */
    EraseHWIO_FlashBlock((WORD)0xFF);
    EraseHWIO_FlashBlock((WORD)0xFE);
    EraseHWIO_FlashBlock((WORD)0xFD);
    EraseHWIO_FlashBlock((WORD)0xFC);

    /* Call the required init function before writing. */
     InitHWIO_Flash();

    /* Write new BootLoader */
    Le_g_Length = 0x4000;       /*Downloaded Boot binary is 16kB */
    Le_g_Source = 0x3FF5000;    /*Downloaded Boot binary is here */
    Le_g_Destination = 0x0000;  /*New Boot should be written here */

    Ve_y_WriteStatus = WriteHWIO_FlashMemory(Le_g_Length,Le_g_Source,Le_g_Destination);

    /* Wait for watchdog timer to reset us */
    while (1)
    {
                ;
        }
}
#endif
```