#include "nios.h"
#include "vicon.h"

/*-----------------------------------------------------------------
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 * Created: May 30th, 2002.
 * Description: Functions for Servo Control
 * Comments:
 *-----------------------------------------------------------------*/

/*-----------------------------------------------------------------*
 * File Wide Variables *
 *-----------------------------------------------------------------*/
int viconspeed;
int vicondirection;
extern np_pio *direction;
extern np_pio *speed;

/*-----------------------------------------------------------------*
 * Accessors *
 *-----------------------------------------------------------------*/
/**
 * Gets the servo's current speed and returns it as an int
 * Created: June 6th, 2002
 * Last Modified: June 6th, 2002
 * Comments:Implementation to be discussed
 */
int GetSpeed(void)
{
    return viconspeed;
}

/**
 * Gets the servo's current direction and returns it as a short
 * or preferably a binary number
 * Created: June 6th, 2002
 * Last Modified: June 6th, 2002
 * Comments:Implementation to be discussed
 */
int GetDirection(void)
{
    return vicondirection;
}

/*-----------------------------------------------------------------*
 * Modifiers *
 *-----------------------------------------------------------------*/
/**
 * Sets the servo's speed based on integer passed in
 * Created: June 6th, 2002
 * Last Modified: July 15th, 2002
 * Comments: Acceptable range 0-7
 */
void SetSpeed(int spd)
if(spd > 7) 
  spd = 7;
else if(spd < 0) 
  spd = 0;

viconspeed = spd;
speed = (np_pio *) 0x430;
speed->np_piodata = viconspeed;

// end of SetSpeed

void SetDirection(int drx) 
{
  if(drx > 7) 
    drx = 7;
else if(drx < 0) 
  drx = 0;

  vicondirection = drx;
direction = (np_pio *) 0x490;
direction->np_piodata = vicondirection;
}

// end of SetDirection