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/*****
*                               V O N O F F C . C                               *
**-----**
*   Task                       : Demonstrates video display enable and disable   *
*                               on EGA and VGA cards.                             *
**-----**
*   Author                     : Michael Tischer                               *
*   Developed on                : 08/26/90                                       *
*   Last update on             : 02/18/92                                       *
**-----**
*   (MICROSOFT C)                                                       *
*   Compilation                 : CL /AS vonoffc.c                             *
**-----**
*   (BORLAND TURBO C)                                                  *
*   Compilation                 : Use the integrated development environment     *
*****/

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#include <dos.h>                                /* Add include files */
#include <conio.h>
#include <stdio.h>

#ifdef __TURBOC__                                /* Compiling with Turbo C? */
#define CLI()          disable()
#define STI()          enable()
#define outpw( p, w ) outport( p, w )
#define inp
    #define outp( p, b ) outportb( p, b )
    #define inp( p )      inportb( p )
#endif
#else                                            /* No --> With Quick C or MSC */
#include <conio.h>
#define MK_FP(seg,ofs) ((void far *)\

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                                (((unsigned long)(seg) << 16) | (ofs)))
#define CLI()                  _disable()
#define STI()                  _enable()
#endif

/*-- Constants -----*/

#define EV_STATC 0x3DA          /* EGA/VGA color status register */
#define EV_STATM 0x3BA          /* EGA/VGA mono status register */
#define EV_ATTR 0x3C0           /* EGA/VGA attribute controller */

/*****
*   ScrOff : Disables the EGA/VGA screen.
**-----**
*   Input   : None
*****/

void ScrOff( void )
{
    CLI();                      /* Disable interrupts */
    inp( EV_STATC );            /* Reset color status reg */
    inp( EV_STATM );            /* Reset mono status reg */
    outp( EV_ATTR, 0x00 );      /* Mask bit 5 from access */
                                /* to CRT controller */
    STI();                      /* Enable interrupts */
}

/*****
*   ScrOn : Enables the EGA/VGA screen.
**-----**
*   Input   : None
*****/

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void ScrOn( void )
{
    CLI();
    inp( EV_STATC );
    inp( EV_STATM );
    outp( EV_ATTR, 0x20 );

    STI();
}

/*****
* IsEgaVga : Determines whether an EGA or VGA card is installed.
*-----**
* Input      : None
* Output     : TRUE if EGA or VGA card, otherwise FALSE
*****/

int IsEgaVga( void )
{
    union REGS Regs;

    Regs.x.ax = 0x1a00;
    int86( 0x10, &Regs, &Regs );
    if ( Regs.h.al == 0x1a )
        return 1;
    else
    {
        Regs.h.ah = 0x12;
        Regs.h.bl = 0x10;
        int86(0x10, &Regs, &Regs);
        return ( Regs.h.bl != 0x10 );
    }
}

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    }
}

/*****
* Delay : BIOS induced time delay.
*-----*
* Input : Delay in seconds
* Output : None
*****/

void Delay( int pauslen )
{
    unsigned int tico_hi,          /* Time counter */
                tico_lo,
                ticks;
    union REGS  inregs,          /* Processor registers */
                outregs;

    ticks = pauslen * 182 / 10;
    inregs.h.ah = 0;              /* Function 00H = Read counter */
    int86( 0x1a, &inregs, &outregs ); /* Get and store time */
    tico_hi = outregs.x.cx;
    tico_lo = outregs.x.dx;

    while ( ticks )              /* Repeat until ticks = 0 */
    {
        int86( 0x1a, &inregs, &outregs ); /* Get time */

        /*-- New tick occurred? -----*/

        if ( tico_hi != outregs.x.cx || tico_lo != outregs.x.dx )
        {
            /* Yes */

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    printf( "Warning: No EGA or VGA card found\n" );  
}
```