MouSetPtrShape

Bindings: C, MASM

This call allows a process to set the pointer shape and size to be used as the mouse device driver pointer image for all applications in a session.

MouSetPtrShape (PtrBuffer, PtrDefRec, DeviceHandle)

PtrBuffer (**PBYTE**) - input Address of a buffer containing the bit image used by the mouse device driver as the pointer shape for that session. The buffer consists of AND and XOR pointer masks in a format meaningful to the pointer draw device driver.

For CGA compatible text modes (0, 1, 2, and 3) the following describes the AND and XOR pointer mask bit definitions for each character cell of the masks. Bit values are:

Bit	Description
15	Blinking
14-12	Background color
11	Intensity
10-8	Foreground color
7-0	Character

PtrDefRec (**PPTRSHAPE**) - input Address of the structure where the application stores the necessary data for the pointer draw device driver to build a row-by-column image for each bit plane for the current display mode. The pointer definition record structure follows:

TotLength (**USHORT**) The total length of the data necessary for the pointer draw device driver to build a row-by-column image for each bit plane for the current display mode.

For all OS/2 system-supported modes, TotLength is specified in bytes and is equal to:

Mono & Text Modes For text mode height and width must be 1, so length is always 4.

TotLength = (height in chars) * (width in chars) * 2 * 2

```
                = 1 * 1 * 2 * 2
                = 4
```

Graphics Mode Width-in-pels must be a multiple of 8.

TotLength = (height in pels)*(width in pels)*(bits per pel)*2/8

Modes 4 and 5 (320 X 200)

TotLength = (height) * (width) * 2 * 2 / 8

Mode 6 (640 X 200)

TotLength = (height) * (width) * 1 * 2 / 8

Length calculations produce byte boundary buffer sizes.

col (**USHORT**) Number of columns in the mouse shape. In graphics modes, this field contains the pel width (columns) of the mouse shape for the session and must be greater than or equal to 1. In text modes, col must equal 1.

row (**USHORT**) Number of rows in the mouse shape. In graphics modes, this field contains the pel height (rows) of the mouse shape for the session and must be greater than or equal to 1. In text modes, row must equal 1.

coloffset (**USHORT**) This value is returned by the mouse device driver to indicate the relative column offset within the pointer image. The value defines the center (hotspot) of the pointer image. This value is a signed number that represents either character or pel offset, depending on the display mode.

rowoffset (**USHORT**) This value is returned by the mouse device driver to indicate the relative row offset within the pointer image. The value defines the center (hotspot) of the pointer image. This value is a signed number that represents either character or pel offset, depending on the display mode.

Programming Note: For other custom displays and for the extended modes of the EGA attachment, it is possible to set the display to modes that require multiple bit planes. In these cases, the area sized by the row and column limits must be repeated for each bit plane supported in that mode. Consequently, the calling process must supply enough data to allow the mouse device driver to draw the pointer shape on all currently supported bit planes in that session. For text modes, row and column offset must equal 0.

DeviceHandle (**HMOU**) - input Contains the handle of the mouse device obtained from a previous MouOpen.

rc (**USHORT**) - return Return code descriptions are:

0	NO_ERROR
385	ERROR_MOUSE_NO_DEVICE
387	ERROR_MOUSE_INV_PARMS
466	ERROR_MOU_DETACHED
501	ERROR_MOUSE_NO_CONSOLE
505	ERROR_MOU_EXTENDED_SG

Remarks

An application passes a data image to the mouse device driver that the mouse driver applies to the screen whenever the logical pointer position is not located in the application-defined collision area. The application synchronizes use of the screen with the mouse driver by way of MouRemovePtr and MouDrawPtr.

The pointer shape is dependent on the display device driver used to support the display device. OS/2 supports text and graphics modes. These modes are restricted to modes 0 through 7, depending on the display device. Character modes (modes 0, 1, 2, 3, and 7) support the pointer cursor only as a reverse block character. This reverse block character has a character height and width equal to 1.

The pointer shape is mapped by the Pointer Draw Device Driver and determined completely by the application. The height and width may vary from 1 through the pel size of the display screen. For restrictions concerning the Pointer Draw Device Driver, see IBM Operating System/2 Version 1.2 I/O

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C bindings

```
typedef struct _PTRSHAPE {   /* moups */
  USHORT cb;                 /* total length necessary to build
                                image */
  USHORT col;                /* # of columns in mouse shape */
  USHORT row;                /* number of rows in mouse shape */
  USHORT colHot;             /* column coordinate of pointer image
                                hotspot */
  USHORT rowHot;             /* row coordinate of pointer image
                                hotspot */
} PTRSHAPE;

#define INCL_MOU

USHORT  rc = MouSetPtrShape(PtrBuffer, PtrDefRec, DeviceHandle);

PBYTE            PtrBuffer;     /* Pointer shape buffer */
PPTRSHAPE        PtrDefRec;     /* Pointer definition record */
HMOU             DeviceHandle;  /* Mouse device handle */

USHORT           rc;            /* return code */
```

MASM bindings

```
PTRSHAPE struc
  moups_cb      dw  ? ;total length necessary to build image
  moups_col     dw  ? ;# of columns in mouse shape
  moups_row     dw  ? ;number of rows in mouse shape
  moups_colHot  dw  ? ;column coordinate of pointer image hotspot
  moups_rowHot  dw  ? ;row coordinate of pointer image hotspot
PTRSHAPE ends

EXTRN  MouSetPtrShape:FAR
INCL_MOU            EQU 1

PUSH@  OTHER   PtrBuffer     ;Pointer shape buffer
PUSH@  OTHER   PtrDefRec     ;Pointer definition record
PUSH   WORD    DeviceHandle  ;Mouse device handle
CALL   MouSetPtrShape

Returns WORD
```