NAME

PEXGetPickDevice - Get Pick Device Attributes

SYNTAX

PEXPDAttributes *PEXGetPickDevice(Display **display*, PEXWorkstation *workstation*, int *pick_device_type*, unsigned long *value_mask*)

PARAMETERS

display A pointer to a display structure returned by a successful **XOpenDisplay** call.

workstation The resource identifier of the workstation.

pick_device_type The pick device type (**PEXPickDeviceDCHitBox** or **PEXPickDeviceNPCHitVolume**).

value_mask A mask indicating which attributes to return.

RETURNS

A pointer to the pick device attribute values; a null pointer if unsuccessful.

DESCRIPTION

This function returns the attribute values of a pick descriptor for the PHIGS workstation resource specified. The descriptor returned will be the currently-defined descriptor for the pick device of the type specified. Supported pick device types are inquirable via **PEXGetEnumTypeInfo**(3)**.** The value mask indicates which attributes are to be returned. The value mask is constructed by OR'ing together the following constants:

PEXPDEchoSwitch
PEXPDEchoVolume
PEXPDPickDataRec
PEXPDPickExcl
PEXPDPickIncl
PEXPDPickPath
PEXPDPickPathOrder
PEXPDPickStatus
PEXPDPromptEchoType

PEXlib allocates memory for the return value. **PEXFreePDAttributes**(3) should be called to deallocate the memory.

DATA STRUCTURES

```
typedef  XID     PEXWorkstation;

typedef struct {
        unsigned short          status;
        PEXPickPath             path;
        int                     path_order;
        PEXNameSet              inclusion;
        PEXNameSet              exclusion;
        PEXPickRecord           pick_record;
        PEXEnumTypeIndex        prompt_echo_type;
        PEXViewport             echo_volume;
        int                     echo_switch;
```

```
} PEXPDAttributes;

typedef struct {
        unsigned long           count;          /* number of elements */
        PEXPickElementRef       *elements;
} PEXPickPath;

typedef struct {
        PEXStructure            sid;
        unsigned long           offset;
        unsigned long           pick_id;
} PEXPickElementRef;

typedef  XID    PEXStructure;

typedef  XID    PEXNameSet;

typedef union {
        PEXPDNPCHitVolume       volume;
        PEXPDDCHitBox           box;
        PEXPickDataRecord       data;
} PEXPickRecord;

typedef  PEXNPCSubVolume    PEXPDNPCHitVolume;

typedef struct {
        PEXCoord        min;
        PEXCoord        max;
} PEXNPCSubVolume;

typedef struct {
        float   x;
        float   y;
        float   z;
} PEXCoord;

typedef struct {
        PEXDeviceCoord2D    position;
        float               distance;
} PEXPDDCHitBox;

typedef struct {
        short   x;
        short   y;
} PEXDeviceCoord2D;
```

```
typedef struct {
        unsigned short          length;         /* number of bytes in record */
        char                    *record;
} PEXPickDataRecord;

typedef  short    PEXEnumTypeIndex;

typedef struct {
        PEXDeviceCoord                  min;
        PEXDeviceCoord                  max;
        PEXSwitch                       use_drawable;
        unsigned char                   reserved[3];
} PEXViewport;

typedef struct {
        short    x;
        short    y;
        float    z;
} PEXDeviceCoord;

typedef  unsigned char   PEXSwitch;
```

ERRORS

BadPEXWorkstation
The specified workstation resource identifier is invalid.

BadValue
The specified pick device type is invalid, or an invalid bit set in the value mask.

SEE ALSO

PEXChangePickDevice(3)
PEXGetEnumTypeInfo(3)