NAME

PEXMapDCToWC - Map Device Coordinate Points to World Coordinate Points

SYNTAX

Status PEXMapDCToWC(Display **display*, PEXWorkstation *workstation*, unsigned long *dc_count*, PEXDeviceCoord **dc_points*, unsigned int **view_index_return*, unsigned long **wc_count_return*, PEXCoord ***wc_points_return*)

PARAMETERS

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

workstation The resource identifier of the workstation.

dc_count The number of device coordinate points.

dc_points An array of device coordinates.

view_index_return Returns the view index of the view containing most or all of the points.

wc_count_return Returns the number of world coordinate points.

wc_points_return Returns an array of world coordinate points.

RETURNS

Zero if unsuccessful, non-zero otherwise.

DESCRIPTION

This function maps the device coordinate points to world coordinate points using the specified workstation. Each view in the workstation's current view table, which has an inverse, is checked to see if it contains all the specified device coordinate points. (If the view transform has no inverse, it is not considered.) The index of the view with the highest view transformation input priority that contains all of the points is returned. If no view contains all the points, the index of the view containing the most points is returned. The points are transformed to world coordinates by passing them through the inverse of the view transform associated with the view index. Points that are clipped (outside the viewport) will not be transformed and returned, so the number of points returned may be less than the number sent.

PEXlib allocates memory for the return value. **XFree** should be called to deallocate the memory.

DATA STRUCTURES

```
typedef  XID     PEXWorkstation;

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

typedef struct {
        float    x;
        float    y;
```

```
        float     z;
} PEXCoord;
```

ERRORS

BadPEXWorkstation
The specified *workstation* resource identifier is invalid.

SEE ALSO

PEXMapWCToDC(3)
PEXSetWorkstationViewPriority(3)