NAME PEXBeginPickOne – Begin Renderer Pick One

SYNTAX void PEXBeginPickOne(Display **display*, Drawable *drawable*, PEXRenderer *renderer*, long *structure_id*, int *method*, int *pick_device_type*, PEXPickRecord **pick_record*)

PARAMETERS

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

drawable The resource identifier of a drawable.

renderer The resource identifier of the renderer.

structure_id A value to be used as the structure identifier for the root of the structure network.

method The pick one method (**PEXPickLast, PEXPickClosestZ, PEXPickVisibleAny, PEXPickVisibleClosest**).

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

pick_record A pointer to the pick data record.

RETURNS None

DESCRIPTION This functions starts an immediate-mode pick, setting the renderer's renderer state to **PEXPicking.** When the renderer state is **PEXPicking,** primitives are hit tested instead of converted to pixels. For pick one, a hierarchical path to the picked primitive will be maintained.

Standard pick one methods are **PEXPickLast, PEXPickClosestZ, PEXPickVisibleAny** and **PEXPickVisibleClosest.** The supported pick device types are inquirable via **PEXGetEnumTypeInfo**(3)**.** The specified structure identifier will be inserted as the first structure component in the returned pick path.

If the specified drawable does not have the same root and depth as the drawable that was used to create the renderer, or, if the specified drawable is not one of the supported drawables returned by **PEXMatchRenderingTargets**(3)**,** a Match error will be generated. If the renderer state is set to **PEXRendering** or **PEXPicking** when this function is called, then the operation in progress is aborted, the **PEXBeginPickOne** function is completed, and a **BadPEXRendererState** error is sent.

All functions which process output commands or manipulate attributes (i.e. all output command functions, **PEXBeginStructure**(3)**, PEXEndStructure**(3)**, PEXRenderElements**(3)**,** and **PEXAccumulateState**(3)) can be called when the renderer state is **PEXPicking.** They will have the same semantics except that primitives are hit tested instead of converted to pixels.

DATA STRUCTURES

```
typedef  XID      PEXRenderer;

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;
```

ERRORS

BadAlloc
The server failed to allocate resources necessary to complete request.

BadDrawable
The specified *drawable* resource identifier is invalid.

BadMatch
The specified *drawable* is unsupported, or the specified renderer resource was not created with a compatible drawable.

BadPEXRenderer
The specified *renderer* resource identifier is invalid.

BadPEXRendererState
The specified *renderer* was in an invalid state.

BadValue
The pick record contains invalid data, or the pick device type is invalid.

SEE ALSO

PEXEndPickOne(3)
PEXPickOne(3)