NAME

XGetDeviceControl, XChangeDeviceControl - query and change input device controls

SYNOPSIS

#include <X11/extensions/XInput.h>

XDeviceControl *XGetDeviceControl(Display *display,
                    XDevice *device,
                    int *controlType);

int XChangeDeviceControl(Display *display,
                XDevice *device,
                int controlType,
                XDeviceControl *control);

display
    Specifies the connection to the X server.

device
    Specifies the device whose control is to be interrogated
    or modified.

controlType
    Specifies the type of control to be interrogated or
    changed.

control
    Specifies the address of an XDeviceControl structure
    that contains the new values for the Device.

DESCRIPTION

These requests are provided to manipulate those input devices
that support device control. A BadMatch error will be generated
if the requested device does not support any device controls.

Valid device control types that can be used with these requests
include the following:

DEVICE_RESOLUTION: Queries or changes the resolution of
valuators on input devices.

The XGetDeviceControl request returns a pointer to an
XDeviceControl structure.

XGetDeviceControl can generate a BadDevice or BadMatch error.

The XChangeDeviceControl request modifies the values of one
control on the specified device. The control is identified by
the id field of the XDeviceControl structure that is passed
with the request.

XChangeDeviceControl can generate a BadDevice, BadMatch, or
BadValue error.

STRUCTURES

Each control is described by a structure specific to that control.
These structures are defined in the file XInput.h.

XDeviceControl is a generic structure that contains two fields
that are at the beginning of each class of control:

```
typedef struct {
    XID class;
    int length;
} XDeviceControl;
```

The XDeviceResolutionState structure defines the information
that is returned for device resolution for devices with
valuators.

```
typedef struct {
    XID control;
    int length;
    int num_valuators;
    int* resolutions;
    int* min_resolutions;
    int* max_resolutions;
} XDeviceResolutionState;
```

The XDeviceResolutionControl structure defines the attributes
that can be controlled for keyboard Devices.

```
typedef struct {
    XID control;
    int length;
    int first_valuator;
    int num_valuators;
    int* resolutions;
} XDeviceResolutionControl;
```

DIAGNOSTICS

BadDevice

An invalid device was specified. The specified device
does not exist or has not been opened by this client via
XOpenInputDevice. This error may also occur if some
other client has caused the specified device to become
the X keyboard or X pointer device via the
XChangeKeyboardDevice or XChangePointerDevice requests.

BadMatch

This error may occur if an XGetDeviceControl request was
made specifying a device that has no controls or an
XChangeDeviceControl request was made with an
XDeviceControl structure that contains an invalid Device
type. It may also occur if an invalid combination of
mask bits is specified (DvKey but no DvAutoRepeatMode
for keyboard Devices), or if an invalid KeySym is
specified for a string Device.

BadValue

Some numeric value falls outside the range of values
accepted by the XChangeDeviceControl request. Unless a
specific range is specified for an argument, the full
range defined by the argument's type is accepted. Any
argument defined as a set of alternatives can generate
this error.