XGetDeviceMotionEvents, XDeviceTimeCoord − get device motion history

XDeviceTimeCoord *XGetDeviceMotionEvents(*display***,** *device***,** *start***,** *stop***,**
*nevents_return***,** *mode_return***,** *axis_count_return***)**
    Display **display***;**
    XDevice **device***;**
    Time *start***,** *stop***;**
    int **nevents_return***;**
    int **mode_return***;**
    int **axis_count_return***;**

display **Specifies the connection to the X server.** *device* **Specifies the device whose motion history is to be queried.** *start*
stop **Specify the time interval in which the events are returned from the motion history buffer. You can pass a timestamp or** *CurrentTime***.** *nevents_return* **Returns the number of events from the motion history buffer.** *mode_return* **Returns the mode of the device (***Absolute* **or** *Relative***).** *axis_count_return* **Returns the count of axes being reported.**

The server may retain the recent history of the device motion and do so to a finer granularity than is reported by *DeviceMotionNotify* **events. The** *XGetDeviceMotionEvents* **request makes this history available.**

The *XGetDeviceMotionEvents* request returns all events in the motion history buffer that fall between the specified start and stop times, inclusive. If the start time is later than the stop time or if the start time is in the future, no events are returned. If the stop time is in the future, it is equivalent to specifying *CurrentTime*.

The *mode* indicates whether the device is reporting absolute positional data (mode=*Absolute*) or relative motion data (mode=*Relative*). Some devices allow their mode to be changed via the *XSetDeviceMode* request. These constants are defined in the file XI.h. The *axis_count* returns the number of axes or valuators being reported by the device.

XGetDeviceMotionEvents can generate a *BadDevice*, or *BadMatch* error.

The *XDeviceTimeCoord* **structure contains:**

typedef struct {
    Time time;
    int *data;
} XDeviceTimeCoord;

The time member is set to the time, in milliseconds. The data member is a pointer to an array of integers. These integers are set to the values of each valuator or axis reported by the device. There is one element in the array per axis of motion reported by the device. The value of the array elements depends on the mode of the device. If the mode is *Absolute*, the values are the raw values generated by the device. These may be scaled by client programs using the maximum values that the device can generate. The maximum value for each axis of the device is reported in the max_val field of the *XAxisInfo* returned by the *XListInputDevices* request. If the mode is *Relative*, the data values are the relative values generated by the device.

You should use *XFreeDeviceMotionEvents* to free the data returned by this request.

Errors returned by this request: *BadDevice*, *BadMatch*.

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 the specified device is the X keyboard or X pointer device.** *BadMatch* **This error may occur if an** *XGetDeviceMotionEvents* **request is made specifying a device that has no valuators and reports no axes of motion.**

Programming with Xlib