Name

Xv --- X Window System video extension

Description

The Xv extension provides support for video adaptors attached to an X display. It takes the approach that a display may have one or more video adaptors, each of which has one or more ports though which independent video streams pass.

An adaptor may be able to display video in a drawable, capture video from a drawable, or both. It translates between video encoding (NTSC, PAL, SECAM, etc...) and drawable format (depth and visual-id pair). An adaptor may support multiple video encodings and/or multiple drawable formats.

Clients use Xv(3X) to gain access and manage sharing of a display's video resources. Typically, a client will use XvQueryExtension(3X) to determine the status of the extension, XvQueryAdaptors(3X) to get a description of what video adaptors exist, and XvQueryEncodings(3X) to get a description of what video encodings an adaptor supports.

Once a client has determined what video resources are available, it is free to put video into a drawable or get video from a drawable, according the capabilities supported. Clients can select to receive events when video activity changes in a drawable and when port attributes have changed.

Summary of Library Functions

The following is a summary of Xv library functions:

XvGetPortAttribute(3X) – return current port attribute value

XvGetStill(3X) – capture a single frame of video from a drawable

XvGetVideo(3X) – capture video from a drawable

XvGrabPort(3X) – lock port for exclusive use by client

XvPortNotify(3X) – event generated when port attributes change

XvPutStill(3X) – write a single frame of video to a drawable

XvPutVideo(3X) – write video into a drawable

XvQueryAdaptors(3X) – return adaptor information for a screen

XvQueryBestSize(3X) – determine the optimum drawable region size

XvQueryEncodings(3X) – return list of encodings for an adaptor

XvQueryExtension(3X) – return version and revision of extension

XvSelectPortNotify(3X) – enable or disable XvPortNotify events

XvSelectVideoNotify(3X) – enable or disable XvVideoNotify events

XvSetPortAttribute(3X) – set an attribute for a port

XvStopVideo(3X) – stop active video

XvUngrabPort(3X) – release a grabbed port

XvVideoNotify(3X) – event generated for video processing

Each of these functions is described in its own Xv man page.

Name

XvFreeAdaptorInfo – free adaptor information

Syntax

XvFreeAdaptorInfo(*p_adaptor_info*)

XvAdaptorInfo **p_adaptor_info*;

Arguments

p_adaptor_info

Pointer to where the adaptor information is located.

Description

XvFreeAdaptorInfo(3X) frees adaptor information that was returned by XvQueryAdaptors(3X). The data structure used for adaptor information is defined in the reference page for XvQueryAdaptors(3X).

Examples

```
Example between .EX and .EE will show in monospace
```

See Also

XvQueryAdaptors(3X), XvFreeEncodingInfo(3X)

XvFreeEncodingInfo (3X)

Name

XvFreeEncodingInfo – free encoding information

Syntax

XvFreeEncodingInfo(*p_encoding_info*)

XvEncodingInfo **p_encoding_info*;

Arguments

p_encoding_info

Pointer to where the encoding information is located.

Description

XvFreeEncodingInfo(3X) frees encoding information that was returned by XvQueryEncodings(3X). The data structure used for encoding information is defined in the reference page for XvQueryEncodings(3X).

Examples

```
Example between .EX and .EE will show in monospace
```

See Also

XvQueryEncodings(3X)

Name

XvGetPortAttribute – return current port attribute value

Syntax

#include <X11/extensions/Xvlib.h>

XvGetPortAttribute(*dpy, port, attribute, p_value*)

Display **dpy*;
XvPortID *port*;
Atom *attribute*;
int **p_vlaue*;

Arguments

dpy Specifies the display screen on which the X Server is to accept requests from X clients. If the display option is not specified, X uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Specifies the port, associated with the given display, for which the attribute values are to be returned.

attribute An atom that identifies the attribute to be queried by this request. Control atoms are obtained using the XInterAtom request with a string from the following table.

p_value Pointer to the location where the attribute value is written on return.

Description

XvGetPortAttribute(3X) returns the current value of the requested port attribute in the integer pointed to by *p_value*. The attribute is identified using an Atom that equates to the attribute name. The XInterAtom request can be used with one of the strings below to return a matching Atom.

Attribute String	Type	Default
"XV_ENCODING"	XvEncodingID	Server dependent
"XV_HUE"	[-1000...1000]	0
"XV_SATURATION"	[-1000...1000]	0
"XV_BRIGHTNESS"	[-1000...1000]	0
"XV_CONTRAST"	[-1000...1000]	0

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returned if XvGetPortAttribute(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvGetPortAttribute(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

[BadMatch]

Generated if the requested attribute atom does not specify an attribute supported by the adaptor.

See Also

XvSetPortAttribute(3X), XvPortNotify(3X)

Name

XvGetStill – capture a single frame of video from a drawable

Syntax

include Xvlib.h

XvGetStill(*dpy, port, d, gc, vx, vy,*

register *Display *dpy;*
XvPortID *port;*
Drawable *d;*
GC *gc;*
int *vx, vy, dx, dy;*
unsigned int *vw, vh;*
unsigned int *dw, dh;*

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port to which the still is outputed.

d Defines the drawable from which the still is to be captured.

gc Defines the graphical context. GC components are: *subwindow-mode, clip-x-origin, clip-y-origin,* and *clip-mask.*

vx,vy,vw,vh Define the location and size of the destination video region into which the still is to be written. *vx* and *vy* define the *x and y* coordinates of the upper-left corner of the video region; *vw and vh* define the width and height, in pixels, of the video region.

dx,dy,dw,dh Define the location and size of the source drawable from which the still image is to be captured. *dx and dy* define the *x and y* coordinates of the upper-left corner of the drawable region; *dw and dh* define the width and height, in pixels, of the drawable region.

Description

XvGetStill captures a single frame of video from a drawable. The position and size of the destination (video) rectangle is specified by *vx, vy, vw*, and *vh*. The position and size of the source (drawable) rectangle is specified by *dx, dy, dw*, and *dh*.

Drawable data is clipped to the bounds of the drawable, scaled to the requested video region size (or the closest size supported) and clipped to the bounds of the video encoding. The contents of any region not updated with drawable data is undefined.

If the still is successfully captured an XvVideoNotify event with detail XvStill is generated for the drawable. If the port is grabbed by another client, this request is ignored, and an XvVideoNotify event with detail XvBusy is generated for the drawable.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]
Returned if XvGetStill(3X) completed successfully.

[XvBadExtension]
Returned if the Xv extension is unavailable.

[XvBadAlloc]
Returned if XvGetStill(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]
Generated if the requested port does not exist.

[BadDrawable]
Generated if the requested drawable does not exist.

[BadGC]
Generated if the requested graphics context does not exist.

[BadAlloc]
Generated if there were insufficient resources to process the request.

See Also

XvPutStill(3X), XvGetVideo(3X), XvPutVideo(3X), XvVideoNotify(3X)

Name

XvGetVideo – capture video from a drawable

Syntax

include Xvlib.h

XvGetVideo(dpy, port, d, gc, vx, vy,

register *Display *dpy;*
XvPortID *port;*
Drawable *d;*
GC *gc;*
int *vx, vy, dx, dy;*
unsigned int *vw, vh;*
unsigned int *dw, dh;*

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port to which video output is sent.

d Defines the drawable from which video output is to be obtained.

gc Defines the graphical context. GC components are: *subwindow-mode, clip-x-origin, clip-y-origin,* and *clip-mask.*

vx,vy,vw,vh Define the location and size of the video region is to be written. *vx* and *vy* define the *x and y* coordinates of the upper-left corner of the video region; *vw and vh* define the width and height, in pixels, of the video region.

dx,dy,dw,dh Define the location of the source drawable from which the video image is to be taken. *dx and dy* define the *x and y* coordinates of the upper-left corner of the drawable region; *dw and dh* define the width and height, in pixels, of the drawable region.

Description

XvGetVideo outputs video from a drawable. The position and size of the destination rectangle is specified by *vx, vy, vw,* and *vh.* The position and size of the source rectangle is specified by *dx, dy, dw,* and *dh.*

Drawable data is clipped to the bounds of the drawable, scaled to the requested video region size (or the closest size supported) and clipped to the bounds of the video encoding. The contents of any region not updated with drawable data is undefined.

If video is successfully initiated, an XvVideoNotify event with detail XvStarted is generated for the drawable. If the port is already in use, its video is preempted, and if the new drawable is different than the old, an XvVideoNotify event with detail XvPreempted is generated for the old drawable. If the port is grabbed by another client, this request is ignored, and an XvVideoNotify event with detail XvBusy is generated for the drawable.

Examples

```
       Example between .EX and .EE will show in monospace
```

Returned Values

[Success]
Returned if XvGetVideo(3X) completed successfully.

[XvBadExtension]
Returned if the Xv extension is unavailable.

[XvBadAlloc]
Returned if XvGetVideo(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]
Generated if the requested port does not exist.

[BadGC]
Generated if the requested graphics context does not exist.

[BadDrawable]
Generated if the requested drawable does not exist.

[BadAlloc]
Generated if there were insufficient resources to process the request.

See Also

XvGetStill(3X), XvPutVideo(3X), XvVideoNotify(3X)

Name

XvGrabPort – lock port for exclusive use by client

Syntax

#include <X11/extensions/Xvlib.h>

XvGrabPort(*dpy, port, time)*

Display **dpy;*
XvPortID *port;*
Time *time;*

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port to be grabbed.

time Specifies the request timestamp.

Description

XvGrabPort(3X) grabs a port. Once a client grabs a port, only that client can make video requests to that port.

If the time is before the current port time, the XvGrabPort request is ignored and XvInvalidTime is returned. If the port is already grabbed by another client, XvAlreadyGrabbed is returned. Otherwise a it returns a status of *Success*. The port time is updated when the following requests are processed: XvGrabPort(3X), XvUngrabPort(3X), XvPutVideo(3X), XvPutStill(3X), XvGetVideo(3X), XvGetStill(3X).

If the port is actively processing video for another client, the video is preempted, and an XvVideoNotify event with detail XvPreempted is generated for its drawable.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]
Returned if XvGrabPort(3X) completed successfully.

[XvInvalidTime]
Returned if requested time is older than the current port time.

[XvAlreadyGrabbed]
Returned if the port is already grabbed by another client.

[XvBadExtension]
Returned if the Xv extension is unavailable.

[XvBadAlloc]
Returned if XvGrabPort(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort] Generated if the requested port does not exist.

See Also

XvUngrabPort(3X) XvVideoNotify(3X)

XvPortNotify (3X)

Name

XvPortNotify – event generated when port attributes change

Syntax

#include <X11/extensions/Xvlib.h>

```
typedef union {
  int type;
  XvVideoNotifyEvent xvvideo;
  XvPortNotifyEvent xvport;
} XvEvent;

typedef struct {
  int type;
  unsigned long serial;
  Bool send_event;
  Display *display;
  XvPortID port_id;
  Time time;
  Atom attribute;
  long value;
} XvPortNotifyEvent;
```

type Specifies the type of event: XvPortNotify.

serial Number of the last request processed by the server.

send_event
True if the event was generated by a SendEvent request.

display A pointer to the display the event was read from.

port_id The port whose attribute has changed.

attribute An atom specifying the attribute that changed.

value The new value of the attribute.

Description

XvPortNotify events are generated when a port attribute is set using the XvSetPortAttribute(3X) function.

Examples

```
Example between .EX and .EE will show in monospace
```

See Also

XvSetPortAttribute(3X), XvGetPortAttribute(3X), XvSelectPortNotify(3X)

Name

XvPutStill – write a single frame of video to a drawable

Syntax

```
#include <X11/extensions/Xvlib.h>

XvPutStill(dpy, port, d, gc, vx, vy, vw, vh, dx, dy, dw, dh)

Display *dpy;
XvPortID port;
Drawable d;
GC gc;
int vx, vy, dx, dy;
unsigned int vw, vh;
unsigned int dw, dh;
```

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port from which to get the still.

d Defines the drawable into which the still is to be written.

gc Defines the graphical context. GC components are: *subwindow-mode, clip-x-origin, clip-y-origin,* and *clip-mask.*

vx,vy,vw,vh Define the location and size of the video region to be written. *vx* and *vy* define the upper-left pixel of the region. *vw* and *vh* define the width and height, in pixels, of the region.

dx,dy,dw,dh Define the location and size of the destination region into which the still image is written. *dx* and *dy* define the upper-left corner of the region. *dw* and *dh* define the width and height, in pixels, of the region.

Description

XvPutStill(3X) writes a single frame of video to a drawable. The position and size of the source (video) rectangle is specified by *vx, vy, vw*, and *vh.* The position and size of the destination (drawable) rectangle is specified by *dx, dy, dw*, and *dh.*

Video data is clipped to the bounds of the video encoding, scaled to the requested drawable region size (or the closest size supported) and clipped to the bounds of the drawable.

If the still is successfully rendered an XvVideoNotify event with detail XvStill is generated for the drawable. If the port is grabbed by another client, this request is ignored, and an XvVideoNotify event with detail XvBusy is generated for the drawable.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returned if XvPutStill(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvGetStill(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

[BadDrawable]

Generated if the requested drawable does not exist.

[BadGC]

Generated if the requested graphics context does not exist.

[BadAlloc]

Generated if there were insufficient resources to process the request.

See Also

XvPutVideo(3X), XvGetStill(3X), XvVideoNotify(3X)

Name

XvPutVideo – write video into a drawable

Syntax

#include <X11/extensions/Xvlib.h>

XvPutVideo(*dpy, port, d, gc, vx, vy, vw, vh, dx, dy, dw, dh***)**

Display **dpy;*
XvPortID *port;*
Drawable *d;*
GC *gc;*
int *vx, vy, dx, dy;*
unsigned int *vw, vh;*
unsigned int *dw, dh;*

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port from which to get video.

d Defines the drawable into which video is to be written.

gc Defines the graphical context. GC components are: *subwindow-mode, clip-x-origin, clip-y-origin,* and *clip-mask.*

vx,vy,vw,vh Define the size and location of the source (video) region to be written. *vx* and *vy* define the upper-left pixel of the region. *vw* and *vh* define the width and height, in pixels, of the region.

dx,dy,dw,dh Define the location and size of the destination (drawable) region into which the video image is written. *dx* and *dy* define the upper-left pixel of the region. *dw* and *dh* define the width and height, in pixels, of the region.

Description

XvPutVideo writes video into a drawable. The position and size of the source (video) rectangle is specified by *vx, vy, vw*, and *vh*. The position and size of the destination (drawable) rectangle is specified by *dx, dy, dw*, and *dh*.

Video data is clipped to the bounds of the video encoding, scaled to the requested drawable region size (or the closest size supported) and clipped to the bounds of the drawable.

If video is successfully initiated, an XvVideoNotify event with detail XvStarted is generated for the drawable. If the port is already in use, its video is preempted, and if the new drawable is different than the old, an XvVideoNotify event with detail XvPreempted is generated for the old drawable. If the port is grabbed by another client, this request is ignored, and an XvVideoNotify event with detail XvBusy is generated for the drawable.

Examples

Example between .EX and .EE will show in monospace

Returned Values

[Success]

Returned if XvPutVideo(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if there were insufficient resources to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

[BadDrawable]

Generated if the requested drawable does not exist.

[BadGC]

Generated if the requested graphics context does not exist.

[BadAlloc]

Generated if there were insufficient resources to process the request.

See Also

XvPutStill(3X), XvGetVideo(3X), XvVideoNotify(3X)

Name

XvQueryAdaptors – return adaptor information for a screen

Syntax

#include <X11/extensions/Xvlib.h>

XvQueryAdaptors(*dpy, win, p_num_adaptors, pp_adaptor_info*)

Display **dpy;*
Drawable *draw;*
int **p_num_adaptors*;
XvAdaptorInfo ***pp_adaptor_info*;

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

draw Specifies a drawable of the screen for which the adaptor information is desired.

p_num_adaptors
A pointer to where the numer of adaptors for the specified screen is returned.

pp_adaptor_info
A pointer to where the list of returned adaptor information is returned.

Description

XvQueryAdaptors(3X) returns an video adaptor information for the screen of the specified drawable. The XvAdaptorInfo structure has the following organization:

```
typedef struct {
  XvPortID base_id;
  unsigned long num_ports;
  char type;
  char *name;
  unsigned long num_formats;
  XvFormat *formats;
} XvAdaptorInfo;
```

base_id The resource ID of the first adaptor port.

num_ports
The number of ports supported by the adaptor.

type A bit mask with the value XvInputMask asserted if the adaptor supports video input, and value XvOutputMask asserted if the adaptor supports video output.

name A vendor specific name that identifies the adaptor.

num_formats
The number of depth/visual id formats supported by the adaptor.

formats A pointer to an array of XvFormat structures.

The XvFormat structure has the following organization:

```
            typedef struct {
              char depth;
              unsigned long visual_id;
            } XvFormat;
```

depth A drawable depth supported by the adaptor.

visual_id A visual-id supported for the given depth by the adaptor.

Examples

```
       Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvQueryAdaptors(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvQueryAdaptors(3X) failed to allocate memory to process the request.

Diagnostics

[Drawable]

Returned if the requested drawable does not exist.

See Also

XvFreeAdaptorInfo(3X)

Name

XvQueryBestSize – determine the optimum drawable region size

Syntax

#include <X11/extensions/Xvlib.h>

XvQueryBestSize(*dpy, port, motion, vw, vh, dw, dh, p_dw, p_dh*)

Display **dpy*;
XvPortID *port*;
Bool *motion*;
unsigned int *vw, vh*;
unsigned int *dw, dh;*
unsigned int **p_dw, *p_dh;*

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Defines the port associated with the display and adaptor for which the optimum size is to be calculated.

motion Specifies *True* if the destination size needs to support full motion, and *False* if the destination size need only support still images.

vw,vh Specifies the size of the source vide region desired.

dw,dh Specifies the size of the destination drawable region desired.

p_dw,p_dh Pointers to where the closest destination sizes supported by the server are retunred.

Description

Some ports may be able to scale incoming or outgoing video. XvQueryBestSize(3X) returns the size of the closest destination region that is supported by the adaptor. The returned size is guaranteed to be smaller than the requested size if a smaller size is supported.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returned if XvQueryBestSize(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvQueryBestSize(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

XvQueryEncodings ( )

Name

XvQueryEncodings – return list of encodings for an adaptor

Syntax

#include <X11/extensions/Xvlib.h>

XvQueryEncodings(dpy, port, p_num_encodings, pp_encoding_info)

register Display *dpy;
XvPortID port;
unsigned long *p_num_encodings;
XvEncodingInfo **pp_encoding_info;

Arguments

*dpy — Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port — Specifies the port whose adaptor is to be queried for its list of encodings.

p_num_encodings — A pointer to where the number of encodings supported by the adaptor is written.

pp_encoding_info — A pointer to where the list of returned encoding information is returned. XvEncodingInfo has the following structure:

```
typedef struct {
  XvEncodingID encoding_id;
  char *name;
  unsigned long width;
  unsigned long height;
  XvRational rate;
} XvEncodingInfo;
```

encoding_id — Specifies the encoding-id of the encoding. The encoding-id is used to identify an encoding when a port's encoding attribute is changed.

name — A pointer to a formatted string that identifies the encoding. The string has the format "*timing-signaltype*". For example "ntsc-composite".

width,height — The width and height, in pixels, of the decoded video image.

rate — The field rate of the decoded video.

The XvRational structure is used to specify a fractional number. It has the following structure:

```
typedef struct {
  int numerator;
  int denominator;
} XvRational;
```

The *numerator* and *denominator* fields specify the appropriate parts of a fractional number.

Description

XvQueryEncodings(3X) returns encoding information about an adaptor. Each encoding is described by the XvEncodingInfo structure described above. The encodings are identified by an encoding-id, which can be used to set or get the encoding attribute of a port.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returned if XvQueryEncodings(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvQueryEncodings(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

See Also

XvFreeEncodingInfo(3X)

XvQueryExtension (3X)

Name

XvQueryExtension – return version and release of extension

Syntax

#include <X11/extensions/Xvlib.h>

XvQueryExtension(*p_version, p_release,*
p_request_base, p_event_base, p_error_base)

unsigned int *p_version, *p_release; unsigned int *p_request_base, *p_event_base, *p_error_base;

Arguments

p_version	Pointer to where the current version number of the *Xv* video extension is written.
p_release	Pointer to where the release number of the *Xv* video extension is written.
p_request_base	Pointer to where the extension major request number is returned
p_event_base	Pointer to where the extension event base is returned
p_error_base	Pointer to where the extension error base is returned

Description

XvQueryExtension(3X) returns the version and release numbers for the Xv video extension currently loaded on the system. The extension major request number, event base, and error base are also returned.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvQueryExtension(3X) completed successfully.

[XvBadExtension]

Returned if the Xv video extension is not available for the named display.

[XvBadAlloc]

Returned if XvQueryExtension(3X) failed to allocate memory to process the request.

Name

XvSelectPortNotify – enable or disable XvPortNotify(3X) events

Syntax

#include <X11/extensions/Xvlib.h>

XvSelectPortNotify(*dpy, port, onoff***)**

Display **dpy*;
XvPortID *port*;
Bool *onoff*;

Arguments

dpy Specifies the display screen on which the X Server is to accept requests from X clients. If the display option is not specified, X uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Specifies the port for which PortNotify events are to be generated when its attributes are changed using XvSetPortAttribute(3X).

onoff Specifies whether notification is to be enabled or disabled.

Description

XvSelectPortNotify(3X) enables or disables PortNotify event delivery to the requesting client. XvPortNotify(3X) events are generated when port attributes are changed using XvSetPortAttribute(3X).

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvSelectPortNotify(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvSelectPortNotify(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

See Also

XvSetPortNotify(3X), XvSetPortAttribute(3X), XvPortNotify(3X)

XvSelectVideoNotify (3X)

Name

XvSelectVideoNotify – enable or disable VideoNotify events

Syntax

#include <*X11/extensions/Xvlib.h*>

XvSelectVideoNotify(*dpy, drawable, onoff*)

register Display **dpy*;
Drawable *drawable*;
Bool *onoff*;

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

drawable Defines the drawable in which video activity is to be reported.

onoff Selects whether video notification is enabled or disabled.

Description

XvSelectVideoNotify(3X) enables or disables events to be reported for video activity in a drawable.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]
Returns True if XvSelectVideoNotify(3X) completed successfully.

[XvBadExtension]
Returned if the Xv extension is unavailable.

[XvBadAlloc]
Returned if XvSelectVideoNotify(3X) failed to allocate memory to process the request.

[BadDrawable]
Generated if the requested drawable does not exist.

See Also

XvVideoNotify

Name

XvSetPortAttribute – sets an attribute of a video port

Syntax

#include <X11/extensions/Xvlib.h>

XvSetPortAttribute(*dpy, port, attribute, value*)

Display **dpy*;
XvPortID *port*;
Atom *attribute*;
int *value*;

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Specifies the port for which the attribute is to be used.

attribute Identifies the port attribute to be set by this request. Can be one of the table entries under the column "String," below.

value Identifies the value to which *attribute* is to be set. Can be one of the table entries under the column "Type," below.

Description

XvSetPortAttribute(3X) permits a client to set the port attribute to specified values. This request supports the following values:

Control String	Type	Default
"XV_ENCODING"	XvEncodingID	Server dependent
"XV_HUE"	[-1000...1000]	0
"XV_SATURATION"	[-1000...1000]	0
"XV_BRIGHTNESS"	[-1000...1000]	0
"XV_CONTRAST"	[-1000...1000]	0

The supplied encoding must be one of the encodings listed for the adaptor, otherwise an Encoding error results.

If the adaptor does not support the exact hue, saturation, brightness, and contrast levels supplied, the closest levels supported are assumed. Use XvGetPortAttribute(3X) to query the resulting levels.

When an XvSetPortAttribute(3X) request is processed, a PortControlNotify(3X) event is generated for all clients that have requested for port changes using XvSelectPortNotify(3X).

Examples

```
     Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvSetPortAttribute(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvSelectVideoNotify(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

[XvBadEncoding]

Generated if an encoding is specified that does not exist.

[BadMatch]

Generated if the requested attribute atom does not specify an attribute supported by the adaptor.

See Also

XvGetPortAttribute(3X), XvSelectPortNotify(3X), XvPortNotify(3X)

Name

XvStopVideo – stop active video

Syntax

#include <X11/extensions/Xvlib.h>

XvStopVideo(*dpy, port, draw*)

Display **dpy*;
XvPortID *port*;
Drawable *draw*;

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Specifies the port for which video is to be stopped.

draw Specifies the drawable associated with the named port.

Description

XvStopVideo(3X) stops active video for the specified port and drawable. If the port is not processing video, or if it is processing video in a different drawable, the request is ignored. When video is stopped a XvVideoNotify(3X) event with detail XvStopped is generated for the associated drawable.

Examples

```
    Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvStopVideo(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvStopVideo(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

[BadDrawable]

Generated if the requested drawable does not exist.

See Also

XvGetVideo(3X), XvPutVideo(3X), XvVideoNotifyEvent(3X)

XvUngrabPort (3X)

Name

XvUngrabPort – release port grabbed for video operation

Syntax

#include <X11/extensions/Xvlib.h>

XvUngrabPort(*dpy, port, time***)**

Display **dpy*;
XvPortID *port*;
Time *time*;

Arguments

dpy Specifies the display screen on which the Xv Server is to accept requests from Xv clients. If the display option is not specified, Xv uses the display screen specified by your DISPLAY environment variable. The display option has the format hostname:number. Using two colons (::) instead of one (:) indicates that DECnet is to be used for transport.

port Specifies the port to be released. If the port had not been previously grabbed, the request is ignored.

time Specifies the request timestamp.

Description

XvUngrabPort(3X) releases a grabbed port. If *time* specifies a time before the last XvGrabPort(3X) was executed, the request is ignored.

Examples

```
Example between .EX and .EE will show in monospace
```

Returned Values

[Success]

Returns True if XvUngrabPort(3X) completed successfully.

[XvBadExtension]

Returned if the Xv extension is unavailable.

[XvBadAlloc]

Returned if XvUngrabPort(3X) failed to allocate memory to process the request.

Diagnostics

[XvBadPort]

Generated if the requested port does not exist.

See Also

XvGrabPort(3X)

Name

XvVideoNotify – event generated for video processing

Syntax

#include <X11/extensions/Xvlib.h>

```
typedef union {
  int type;
  XvVideoNotifyEvent xvvideo;
  XvPortNotifyEvent xvport;
} XvEvent;

typedef struct {
  int type;
  unsigned long serial;
  Bool send_event;
  Display *display;
  Drawable drawable;
  unsigned long reason;
  XvPortID port_id;
  Time time;
} XvVideoNotifyEvent;
```

type Specifies the type of event: XvVideoNotify(3X).

serial Number of the last request processed by the server.

send_event
True if the event was generated by a SendEvent request.

display A pointer to the display the event was read from.

drawable
The drawable for which the event was generated.

reason The reason the event was generated: **XvStarted**, **XvStopped**, **XvStill**, **XvPreempted**, **XvBusy**, **XvHardError**.

port_id The port processing the video for which the event was generated.

Description

XvVideoNotify(3X) events are generated when video is started, stopped, displayed as a still image, preempted by another video request, ignored because the port is grabbed by another client, or interruped because of a hard transmission or reception error.

Examples

```
Example between .EX and .EE will show in monospace
```

See Also

XvPutVideo(3X), XvPutStill(3X), XvGetVideo(3X), XvGetStill(3X), XvStopVideo(3X), XvSelectVideoNotify(3X)