NAME

XvListImageFormats - return list of image formats supported by a video port

SYNTAX

#include <X11/extensions/Xvlib.h>

XvImageFormatValues * XvListImageFormats (Display **dpy***,**
        XvPortID *port***, int ****p_num_formats***);**

ARGUMENTS

dpy   Specifies the connection to the X server.

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

p_num_formats
        A pointer to where the number of formats returned in the array is written.

DESCRIPTION

XvListImageFormats(3) returns the XvImageFormatValues supported by the specified port. This list should be freed with **XFree**(3).

RETURN VALUES

XvImageFormatValues has the following structure:

```
typedef struct {
  int id;             /* Unique descriptor for the format */
  int type;            /* XvRGB, XvYUV */
  int byte_order;        /* LSBFirst, MSBFirst */
  char guid[16];         /* Globally Unique IDentifier */
  int bits_per_pixel;
  int format;           /* XvPacked, XvPlanar */
  int num_planes;

  /* for RGB formats */
  int depth;
  unsigned int red_mask;
  unsigned int green_mask;
  unsigned int blue_mask;

  /* for YUV formats */
```

```
        unsigned int y_sample_bits;
        unsigned int u_sample_bits;
        unsigned int v_sample_bits;
        unsigned int horz_y_period;
        unsigned int horz_u_period;
        unsigned int horz_v_period;
        unsigned int vert_y_period;
        unsigned int vert_u_period;
        unsigned int vert_v_period;
        char component_order[32];    /* eg. UYVY */
        int scanline_order;          /* XvTopToBottom, XvBottomToTop */
    } XvImageFormatValues;
```

id   A unique descriptor for the format. This is often the FOURCC for the format, when
              applicable. This id is used to describe the format during XvImage creation.

type   XvRGB or XvYUV.

byte_order
              The byte order of the image. It is either LSBFirst or MSBFirst.

guid   The Globally Unique IDentifier (also known as Universally Unique IDentifier). When not
              applicable, all characters are NULL.

bits_per_pixel
              The bits taken up (but not necessarily used) by each pixel. Note that for some planar formats
              which have fractional bits per pixel (such as IF09) this number may be rounded _down_.

format   XvPacked or XvPlanar.

num_planes
              The number of planes in planar formats.

depth   Significant bits per pixel.

red_mask, green_mask, blue_mask
              The red, green and blue bitmasks (RGB formats only).

?_sample_bits

The size of each sample in bits (YUV formats only).

horz_?_period, vert_?_period
        The period (in pixels) on which samples occur in the horizontal and vertical directions (YUV formats only).

component_order
        Upper case ascii characters representing the order that samples are stored within packed formats. For planar formats this represents the ordering of the planes.

scanline_order
        XvTopToBottom or XvBottomToTop.

NOTES

Since some formats (particularly some planar YUV formats) may not be completely defined by the parameters above, the guid, when available, should provide the most accurate description of the format.

DIAGNOSTICS

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

SEE ALSO

XvCreateImage(3), **XvCreateShmImage**(3)