

NAME

XkbComputeShapeBounds - Updates the bounding box of a shape

SYNOPSIS

Bool XkbComputeShapeBounds (XkbShapePtr *shape*);

ARGUMENTS

shape

shape to be examined

DESCRIPTION

Xkb provides a number of convenience functions to help use a keyboard geometry. These include functions to return the bounding box of a shape's top surface and to update the bounding box of a shape row or section.

A shape is made up of a number of outlines. Each outline is a polygon made up of a number of points. The bounding box of a shape is a rectangle that contains all the outlines of that shape.

A ShapeRec contains a BoundsRec that describes the bounds of the shape. If you add or delete an outline to or from a shape, the bounding box must be updated.

XkbComputeShapeBounds updates the BoundsRec contained in the *shape* by examining all the outlines of the shape and setting the BoundsRec to the minimum x and minimum y, and maximum x and maximum y values found in those outlines. *XkbComputeShapeBounds* returns False if *shape* is NULL or if there are no outlines for the shape; otherwise, it returns True.

If you add or delete a key to or from a row, or if you update the shape of one of the keys in that row, you may need to update the bounding box of that row. To update the bounding box of a row, use *XkbComputeRowBounds*.

STRUCTURES

```
typedef struct _XkbShape {
    Atom      name;      /* shape's name */
    unsigned short num_outlines; /* number of outlines for the shape */
    unsigned short sz_outlines; /* size of the outlines array */
    XkbOutlinePtr outlines; /* array of outlines for the shape */
    XkbOutlinePtr approx; /* pointer into the array to the approximating outline */
    XkbOutlinePtr primary; /* pointer into the array to the primary outline */
    XkbBoundsRec bounds; /* bounding box for the shape; encompasses all outlines */
}
```

```
} XkbShapeRec, *XkbShapePtr;
```

```
typedef struct _XkbBounds {
```

```
    short x1,y1; /* upper left corner of the bounds, in mm/10 */
```

```
    short x2,y2; /* lower right corner of the bounds, in mm/10 */
```

```
} XkbBoundsRec, *XkbBoundsPtr;
```

SEE ALSO

XkbComputeRowBounds(3)