XGL Visual Font Editor

vfe

XGL Visual Stroke Font Editor

The XGL SDK product includes a font editor called Visual Font Editor (vfe). With this program, you can create new stroke fonts for the XGL library or edit the stroke fonts provided with XGL. Vfe is invoked by keying in the command name and the full path of font files as space-separated command line arguments. If no arguments are provided, vfe assumes a new font is being created.

Vfe initially displays a font editor window. To edit font characters, use the font window pop-up menu to bring up a character editor window. The functionality provided in the font editor and character editor windows is described in the following sections. Help is provided on-line by positioning the cursor over an item and pressing the Help key.

The stroke fonts used by XGL are created as ASCII files and converted to binary files using the filter `make_font`. These files are loaded by XGL to display text. You can regenerate the ASCII files for the XGL fonts using the filter `make_source` and then edit the font characters. When your edits are complete, execute the `make_font` filter to create a binary for the edited font. Similarly, if you are creating a new stroke font, execute the `make_font` filter to create the binary font file for the XGL library.

Stroke Font Editor Window

The Stroke Font Editor window displays the font name (“New Font” if a new font is being created), the FILE button, which displays a menu containing font file related commands, the page number, the maximum and minimum extents, and a 16 x 16 array of the font characters.

A cursor moving over the grid causes a frame to be drawn around the character currently under the cursor. The character number is displayed in the right footer of the window. Operations on this character may be selected from a pop-up menu. Prompts are displayed in the left footer.

File Menu

The File menu displays the following commands:

Load	Displays a pop-up window in which you can key in the path and name of the font file. A new edit window is opened if the font file is loaded successfully.
New	Opens a new blank edit window.
Save	Saves the font to the file where it was loaded.
Save As...	Displays a pop-up window in which you can key in the directory and name of the font file for the new font.

Page

The characters in the font are displayed in contiguous pages of 256 characters each. Characters in fonts having more than 256 characters may be accessed by turning to the appropriate page. A maximum of 256 pages is possible.

Extents

The XGL stroke fonts are scalable and are described in a normalized system. The height of an uppercase letter is 100 units. The extents are measured from the base of the uppercase letter called the base line. For porportionately spaced fonts, individual character widths may vary. A mono-spaced font option is available as an argument to the filter `make_font`.

Max y:	This is the maximum ascent of any character above the base line. This may range between 100 and 150.
Min y:	This is the maximum descent of any character below the base line. This may range between 0 and -50.

Pop-Up Menu Commands

The following commands operate on the currently selected character.

Edit...	Opens a Character Edit Window containing the selected character.

Cut	Removes the character from the font and places it in an internal buffer.
Copy	Copies the character from the font into an internal buffer.
Paste	Replaces the contents of the internal buffer with the character.
Merge	Appends the contents of the internal buffer to the character.

Stroke Character Editor Window

The Stroke Character Editor window displays the font from which the character was selected, the character's index number, a view window that shows the character, and the editor window. The cursor changes to a crosshair on entering the stroke character window. The location of the crosshair is displayed in the right footer of the window. The character's base and cap lines are shown as horizontal dashed lines at y = 0 and y = 100 respectively.

The Character Editor window includes the following buttons:

Apply	Copies the character back to the stroke font editor window from which it came.
Grid...	Turns the grid display on or off, snaps the cursor to the grid, and adjusts the grid spacing.
Bearings...	Allows you to specify left and right bearings (clearances).
Size...	Allows you to adjust the point size of the displayed character in the small view window. The equivalent inch and millimeter values are displayed.
Create...	Allows you to draw strokes by entering a polyline, creating a box or circle, or making a copy of an existing stroke (or strokes). For more information, see "Creating Strokes" on page 4.
Modify...	Allows you to move, delete, scale, or rotate a stroke. For more information, see "Modifying Strokes" on page 4.
Select...	Select strokes for modification. There is only one set of strokes selected at any one time. The selected strokes are drawn dashed. Choose Select Stroke and then click the Select mouse button on the stroke in the edit window to cause any current

selection to be deselected and that stroke selected. Click the Adjust mouse button to add the stroke to the selection or remove it from the selection if it has already been selected. Choose Clear to clear the selection.

Undo	Reverses the preceding operation. A single level of undo is provided for the Apply, Create and Modify operations.

Creating Strokes

The Create menu allows you draw strokes by entering a polyline, creating a box or circle, or making a copy of an existing stroke (or strokes). Note that once you enter a Create operation, the operation is active until to select another menu option. The prompt in the left footer will help you monitor the action.

Note – Strokes are essentially polylines, and once created, they do not retain any information about how they were created.

Create geometry for the font character as follows:

Stroke	Start a stroke by clicking Select at the start point. A rubber band line will stretch from this point to the cursor. Move and click Select at the next desired point. The rubber band is replaced by a solid line and the rubber band restarted at the last point. Continue creating the stroke in this manner. Complete the stroke by double clicking the last point. You may undo each step of the stroke.
Box	Click Select at one corner of the box, and a rubber band rectangle will stretch from that point to the cursor. Click Select again at the opposite corner to create the stroke in the form of a box.
Circle	Click Select at the center of a circle, and a rubber band circle will stretch from that point to the cursor. Click Select again to create a circular stroke.
Copy	Click Select on a stroke to attach a copy of the stroke to the cursor. Move the cursor and click Select again to drop the copy at the second position. If a selection exists, the whole selection is copied and moved.

Modifying Strokes

The Modify menu allows you to modify geometry by moving, deleting, scaling, or rotating it. Note that once you enter a Modify operation, the operation is active until to select another menu option. The prompt in the left footer will help you monitor the action.

Move — Click Select on a vertex of a stroke when there is no selection to cause the adjacent segment(s) to rubber band with the cursor. Click Select again to move the vertex to that position. Clicking on a segment attaches the whole stroke to the cursor.

If a selection exists, all selected strokes are dragged to the new position regardless of whether the initial point was on a vertex.

Delete — Delete selected geometry. If no geometry is selected, you are prompted to select a stroke. Prompts are displayed in the left footer.

Scale — Scale a stroke by selecting it and moving the cursor. A rubber band of the stroke will stretch and shrink according to the position of the cursor. The scaling is about its center of gravity. Different scaling along the x and y axes may be achieved by locating the cursor appropriately. Strokes may be flipped about the x and y axes by moving the cursor to the opposite side of the center of gravity.

If nothing is selected, position the first click over the stroke to identify it. If a selection exists, all the selected strokes would be scaled.

Rotate — Rotate a stroke about its center of gravity. Click Select on the stroke and rotate it by swinging the cursor about the stroke's center of gravity. Click Select again to drop the stroke at the new position. Multiple strokes may be rotated by operating on a selection. The rotation of multiple strokes is about the center of gravity of all the selected strokes.