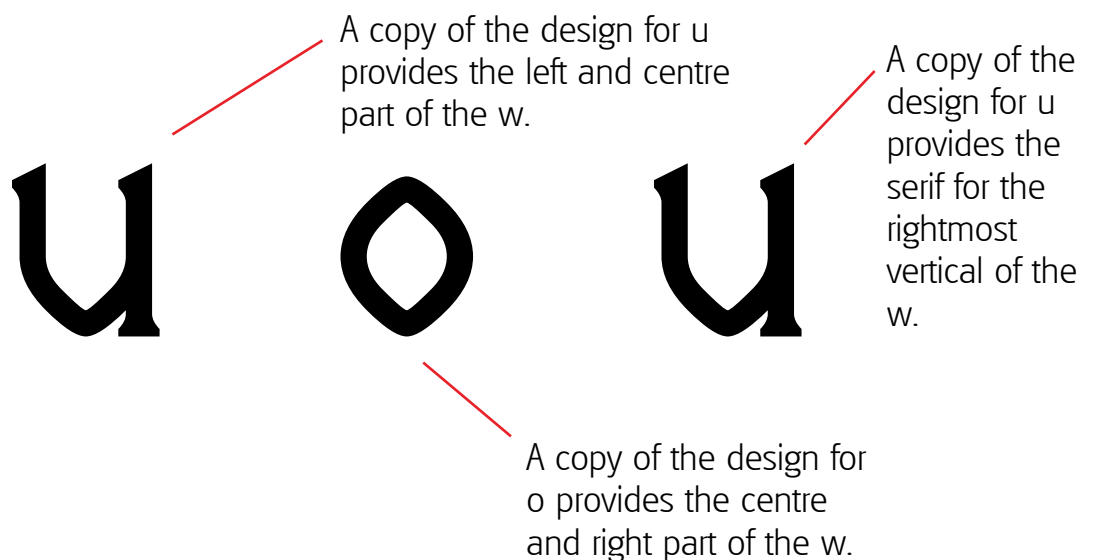# Chapter 6

The next stage in the production of this font is now to use FFAE0006.TTF "Font for an exhibition 0006" as the working font.

The letter w is interesting. In Chapter 2 I mentioned that in order to help the font display well on screen at smaller sizes, such as 12 point and 18 point in basic software packages, I base, wherever possible, the positions of contours on an imaginary grid where the lines are spaced at 256 font units apart and on points which are 168 font units from grid lines in either or both directions. This policy produces an interesting situation in relation to a small letter w. There are three possibilities: namely not to use the policy for this letter, to use the policy and keep the two gaps between the three verticals of equal width yet the letter not fit the general design of the font, to use the policy and have the two gaps not of equal width. I have decided to use the policy and to have the two gaps not of equal width, also making the second gap wider. This could be changed later if it looks wrong, yet hopefully an agreeable distinctiveness to the font will be produced.

A copy of the design for u provides the left and centre part of the w.

A copy of the design for u provides the serif for the rightmost vertical of the w.

A copy of the design for o provides the centre and right part of the w.

So where should the three verticals of the w be located? The leftmost vertical is between 88 and 256 font units horizontally. The centre vertical is between 768 and 936 font units horizontally. If the horizontal gaps between the verticals were to be of equal width, the rightmost vertical would be from 1448 (being 936 + (768 - 256)) to 1616 (being 1448 + 168) horizontally. The next multiple of 256 after 1448 is 1536, which would place the vertical from 1536 to 1704; the next multiple of 256 after 1616 is 1792, which would place the vertical from 1624 to 1792. I choose 1536 to 1704, which makes the body width of the w 1792 font units, which is a multiple of 256 font units, so that may help the general displaying of the font at small sizes.

The next stage is to remove the base structure from the centre vertical. Now, a few points need moving and contour merging needs to take place so as to connect the two contours so as to produce one contour and a finished design.

An additional point is inserted after the point at 936, 1104 and that new point is merged onto the point at 1024, 512. The point at 1024, 512 is moved to 936, 512. That is a movement of 88 pixels to the left. The point at 1024, 402 is moved to 936, 402 so that there is a smooth curve. The off curve point at 856, 336 is deleted. The on curve point at 856, 512 is moved to 852, 252, being

(768 + 936)/2, 168 + (852 - 768). This is so that the curve is smooth at 768, 168 and with the intention of having a right angle turn at 852, 252. The point at 1024, 168 is now moved to 936, 168, being 852 + (852 - 768), 168. The off curve point at 1152, 0 is now moved to 1104, 0, being 936 + 168, 0.

Please consider the two points at 256, 168 and 356, 302. Please consider the two points at 936, 168 and 1124, 302. The point at 1124, 302 is to be moved.

The point is moved to a point such that the second pair of points being considered are relatively spaced from each other equally to the way that the first pair of points are spaced from each other, the point being moved to 1036, 302. The off curve point at 1258, 168 is moved to 1170, 168, being 1036 + (302 -168), 168.

This completes the design of the small letter w of the font. The glyph is mapped to character 119 of the font.

This means that designs for half of the basic lowercase alphabet have now been produced.

A small letter d is the next letter to be added to the font. It is produced using copies of the designs of a small letter o and a small letter l. The copy of the small letter l is shifted to the right so that the main width of the character is between 768 and 936 font units horizontally. A copy of the contour of the small letter l design is then pasted onto the copy of the small letter o design, the contours are merged and some points are deleted so as to produce the design for a small letter d. The glyph is mapped to character 100.

Now a letter y is added to the font. This is produced from copies of the designs of a small letter u and a small letter o. The lower half of the copy of the o is moved downwards by 512 font units. The two contours are then joined. A copy of the joined contour is then pasted onto a copy of the design for a letter u, which has had the two serifs at the base of the rightmost vertical removed. The two contours are then joined so as to produce the design for a small letter y. The glyph is mapped to character 121.

A letter g is now added to the font. This is produced from copies of the designs of a small letter q and a small letter o. The lower half of the copy of the o is moved downwards by 512 font units. The two contours are then joined. A copy of the joined contour is then pasted onto a copy of the design for a letter q, which has had the descender removed. The two contours are then joined so as to produce the design for a small letter g. The glyph is mapped to character 103.

The characters added in this chapter are shown on the next page in both black and colour.

Here are the characters added in this chapter.

w d y g

Here are the characters added in this chapter in colour.

w d y g

Here are the characters added in this chapter in another colour.

w d y g