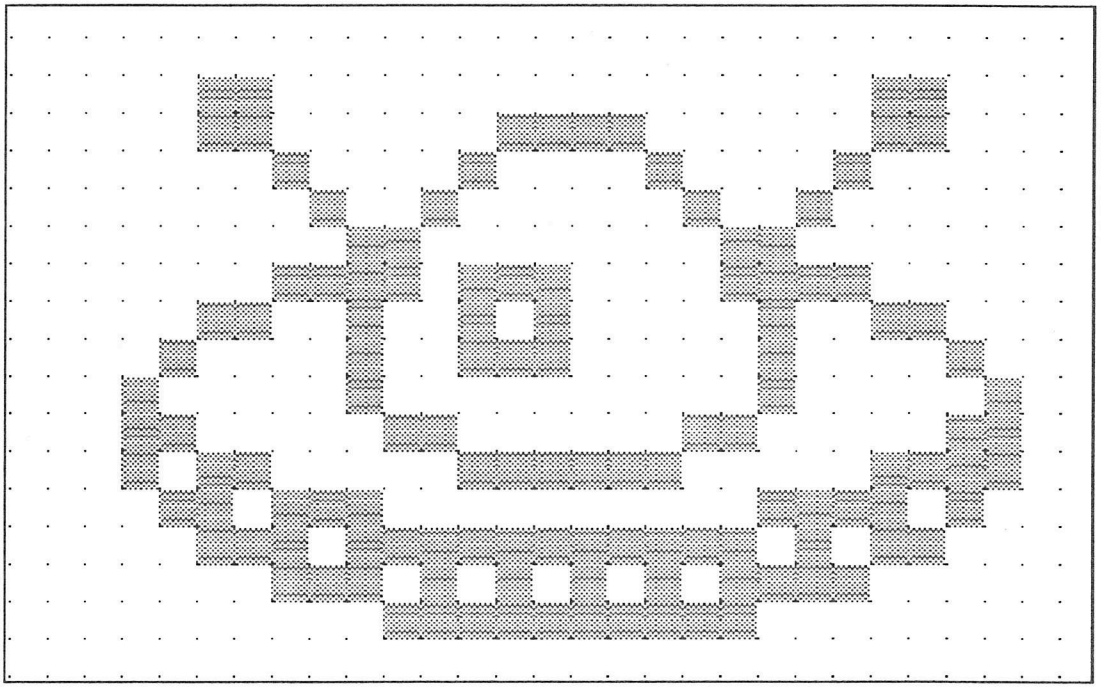
6. USING BITMAPS WITH SKETCH

A bitmap is an image consisting of an array of dots., or bits. In a bitmap, the ones are black and the zeros are white. You can create a bitmap from sketch elements using the **Bit image** command from the Sketch command menu. You can also create bitmaps programmatically in Lisp. Alternatively, you can put screen images into Sketch windows, just as you would in TEdit . Procedures for capturing, editing, and manipulating bitmaps are described in this chapter.

The flying saucer  shown here is actually composed of a series of black and white dots. If you were to attempt to edit the image using the bitmap editor, you would be able to observe its real composition as shown below.



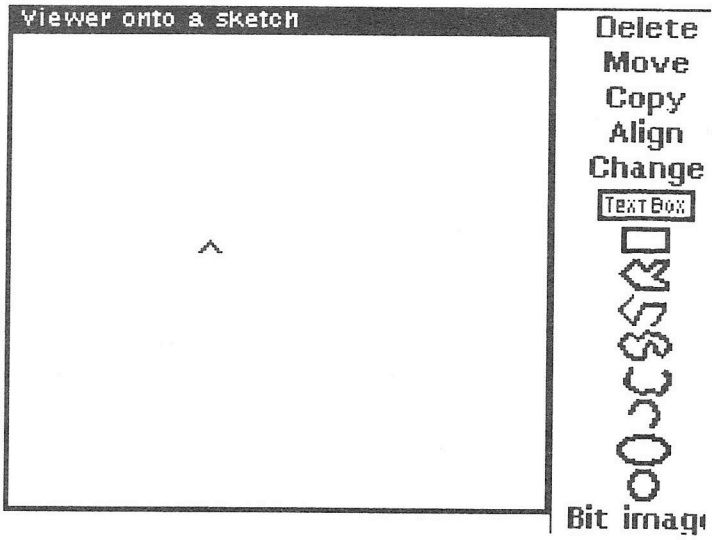
Using Bitmaps in Sketches

This section explains how to put a bit image into a Sketch window, and use the bitmap editor to change the bitmap. It also explains how some of the menu images in this manual were inserted.

Place your cursor where you want the bitmap to appear in the sketch window. Do this by moving the cursor to the desired place, then pressing one of the mouse buttons to position the caret as shown below.

Positioning the caret in the Sketch window does not specify where the bitmap is to go. It merely designates the Sketch window as the active region. This procedure is particularly

necessary in case you have an open TEdit window on your screen. If you have an open TEdit window, and forget to position the caret in the Sketch window, the bitmap will be inserted in the TEdit window.



To insert a piece of your display screen, position the cursor in the background, press the SHIFT key, then press the right mouse button. A small box containing the word "SNAP" will appear. Move the cursor into the box until it is highlighted and the cursor will become a . With the SHIFT key still held down, press the left mouse button and sweep out the area you want to insert into the Sketch window. Release both the SHIFT key and the mouse button. The prompt region at the top of the Sketch window will prompt you to move the figure into place, and the area you have defined will appear in the window.

Freezing Pop-up Menus

Many of the menus used in the Sketch program are not persistent, that is, they do not remain on your screen until you close them. Instead they are pop-up menus, appearing when you press a particular mouse button or select a command, and disappearing when you select a menu option. As such, they are more difficult to capture. This section tells you how to freeze those menus for insertion into Sketch windows or TEdit documents.

To freeze a pop-up menu, you must first define a Lisp interrupt function.

1. In the Xerox Lisp Exec window, type

   INTERRUPTCHAR(6 (SNAPW) T)

   This function will return

   (6 NIL NIL)

2. Put the cursor over a bitmap in your Sketch window, and invoke the **Operations on bitmaps** (shown below in figure 6-1) menu by pressing the left button.

3. With the left button still held down, press CONTROL-F on your keyboard. The cursor will become and you can now sweep out the area of the menu you wish to capture. This bitmap will be frozen on your screen, and can be shifted into the Sketch window using the SHIFT-Snap method described in Chapter 5, Using Sketch with TEdit..

Editing a Bitmap

Move the cursor over the bitmap's image in the sketch window and press the left button. The menu shown in figure 6-1 will appear.

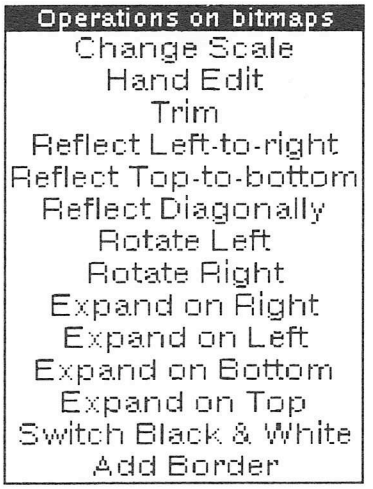


Figure 6-1. The menu for editing bitmaps

Select the **Hand Edit** command. The cursor will change into ☐, and a large box outline will appear. This outline is the region the bitmap editor will occupy. Move the box to the place on the screen where you want the bitmap editor window to reside and press the left button. The bitmap editor window will appear at that location.

Edit the image by pressing the left or middle button in the large area at the bottom of the window. The image can be scrolled using the normal scroll bars if not all of it appears in the editing area. To quit, press the middle button while the cursor is in the grey area at the upper-right part of the window. A menu will appear as shown.

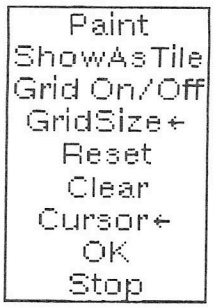


Figure 6-2. The pop-up menu for the bitmap editor window

Select **OK** to have the changes you made put back into the sketch. Select **Stop** if you want your changes disregarded. After you exit the bit map editor, the image in the Sketch window is often incorrect. Select **Redisplay** from the right button Lisp menu to make the image more accurate.

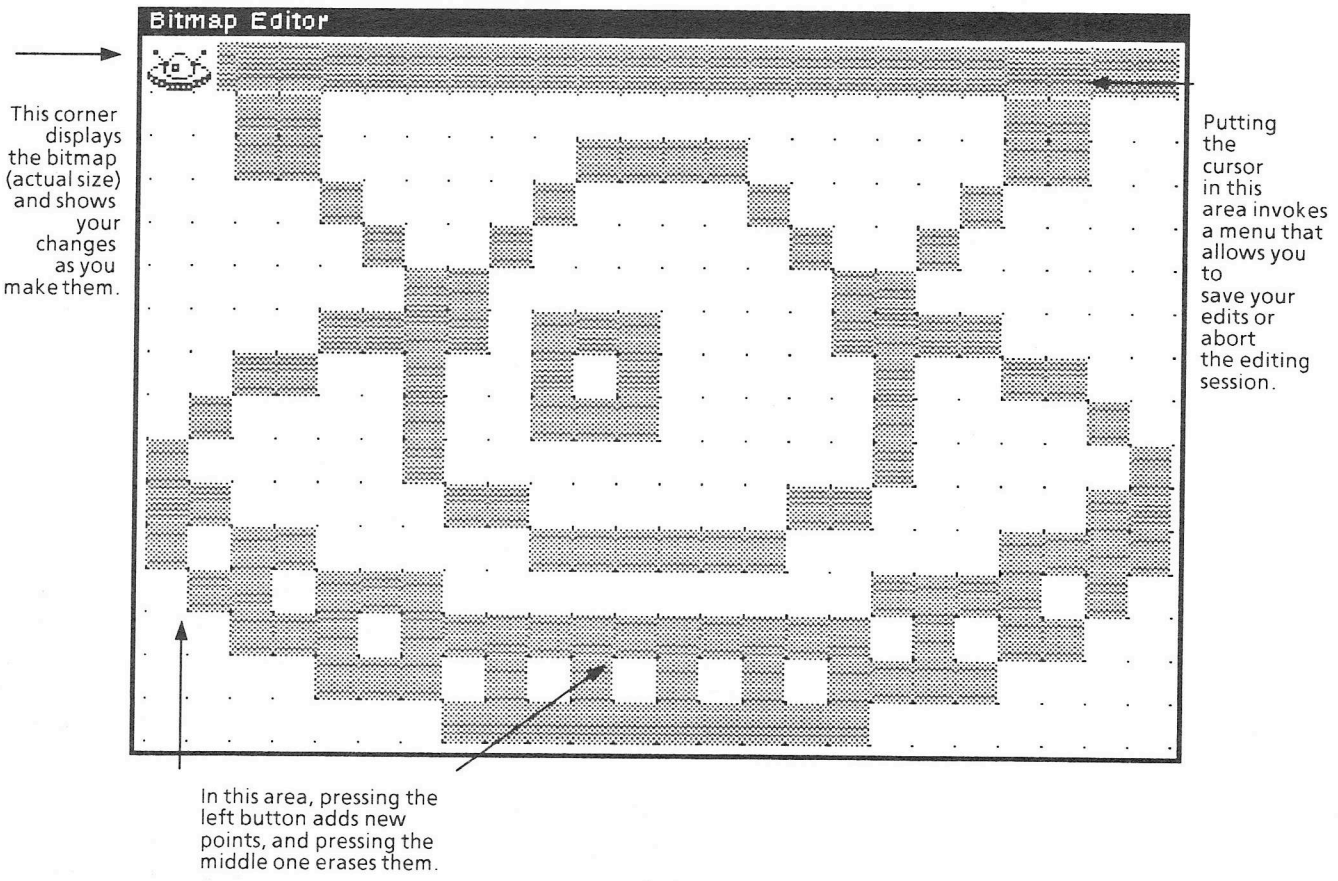


Figure 6-3 A sample bitmap editor window

Another useful bitmap editor command is **Trim**, available from the **Operations on Bitmaps** menu shown in figure 6-1. **Trim** will remove all the edge rows and columns that contain only white bits, making it easier to place lines and text around the bitmap and saving storage space.

Putting a Border Around a Bitmap

Move the cursor over the bitmap's image in the Sketch window and press the left button. The menu shown in figure 6-1 will appear. Select the **Add border** item. This will prompt you for the number of bits you want in the border, then allow you to edit a four-by-four shade that will be put in the border. You can add multiple borders. For a complete description of the bitmap editor, see the EditBitMap documentation in the *Lisp Library Modules Manual.*