

## Transferring computer designs to materials

Margaret Beith

Computer drawing packages are increasingly popular with students as an aid to designing, but how do you transfer designs to textiles and other materials? Margaret Beith outlines a number of methods

Many students now have easy access to computer drawing packages and having drawn a design on computer, they need to find a suitable method for transferring their design to the material. (I use the term 'material' because although students will often be transferring designs to textiles, materials such as wood or paper may be the destination for the design.) The problem is the same as it has always been with designs that are drawn on paper, but because of the modern attitudes to designing and making, teachers need to be much more aware of the wide range of methods.

One of the first points students need to be aware of is that when transfer methods result in a mirror image of the design, it is important to have a print-out which is a mirror image of the design. You will need to know if your computer program will allow this before you start, or design a pattern which will not be affected by being reversed.

### ■ Hand copying

The computer can be used for very simple designs to see which colours work best and these may be easily copied onto the medium that is being used. This is particularly true where the design on the screen is clearly related to the medium that is being used as in the example where paint is simply dribbled onto a coloured paper (see Figure 1) or a

design is drawn with a resistant material such as wax and then sprayed or painted with paint or dye (see Figures 2a and 2b).

For more complex patterns, the designs can be copied in encaustic art. The design is drawn with wax crayons on a heat-retaining card. The use of heat can allow the pattern to be altered and the finished design can be left to cool on the card or be transferred to fabric using a hot iron (see Figure 3).

### ■ Carbon paper

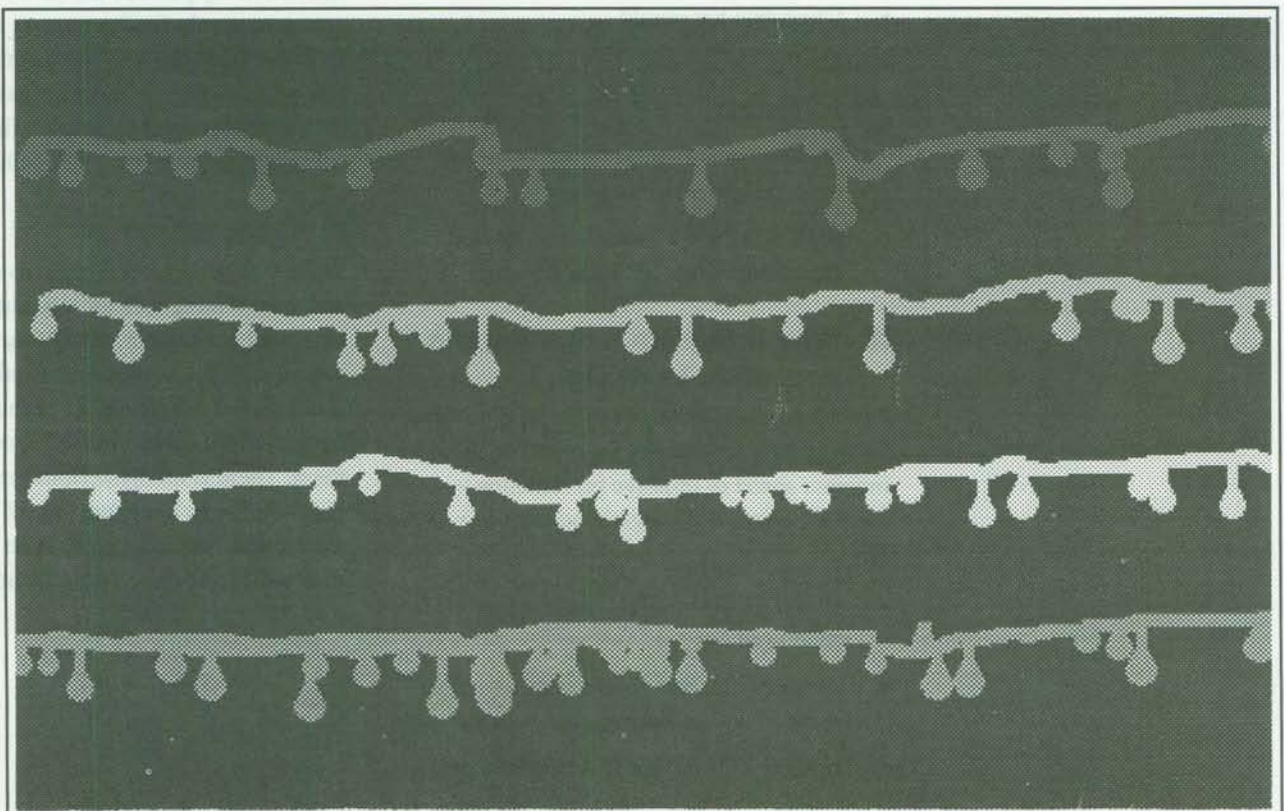
With this method, carbon paper is laid between a print-out of your design and the fabric and the outline is traced using a stylus. This method is suitable for light coloured textiles, wood and plastic and is suitable for activities such as marquetry and pyrography as well as textile design.

### ■ Tracing paper

In the case of a repeat pattern, one section can be traced onto a block of wood or linoleum to make a printing block for a design (see Figure 4).

Cross-stitch designs, knitting and tufted wool are closely related to the pixels on a low-resolution computer design. Design sheets can be placed over the design and a pattern drawn onto this. This can be done using a

Fig. 1: Paint has been dribbled onto coloured paper





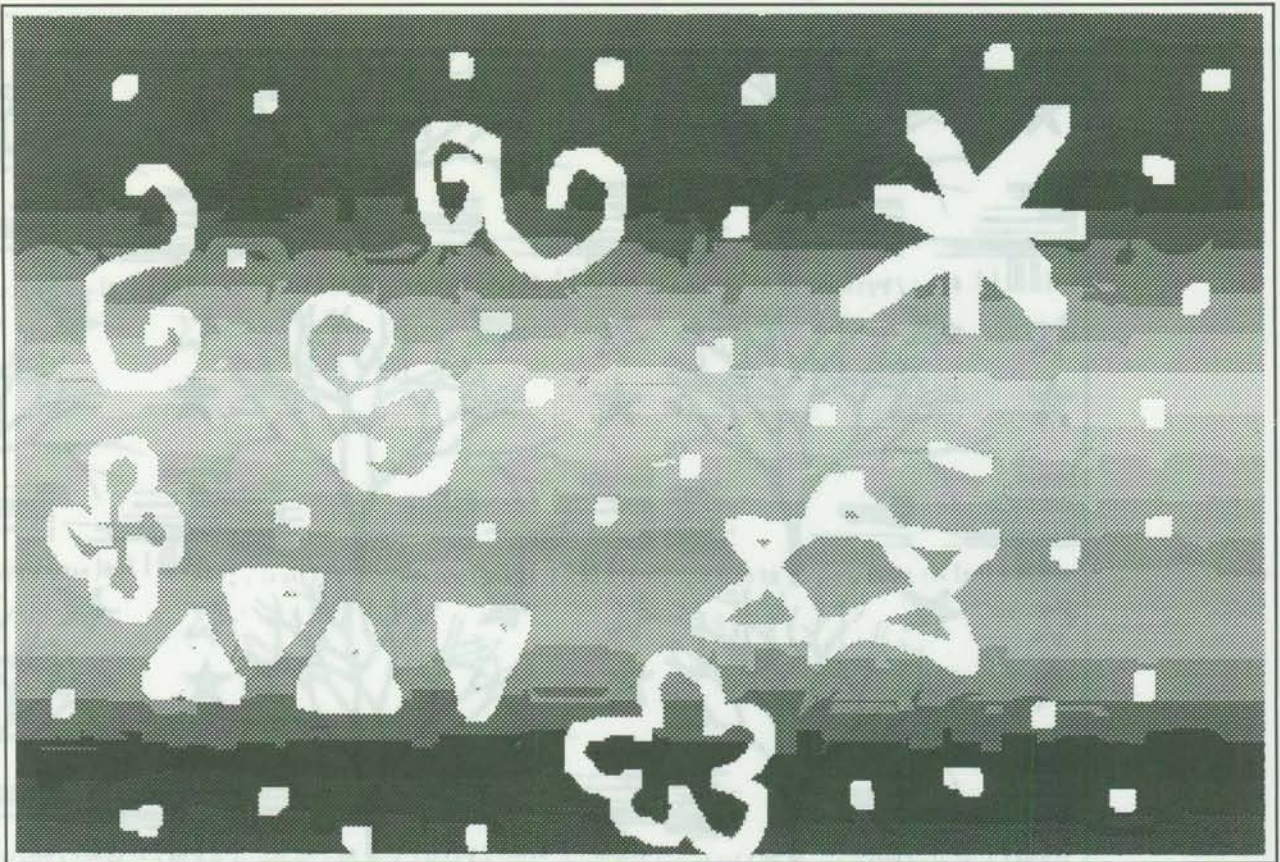


Fig. 2a

Fig. 2b: The pattern has been drawn with wax and then the fabric was sprayed with Dekal Silk dye

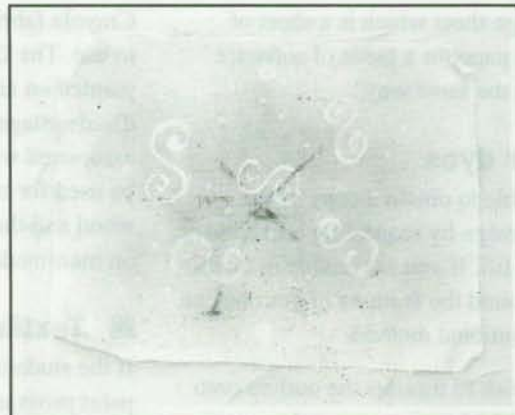


Fig. 2c: The pattern has been drawn with wax and then the fabric was painted using Pentel Fabricfun

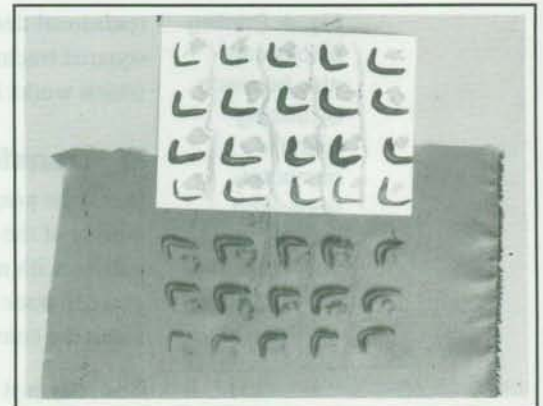
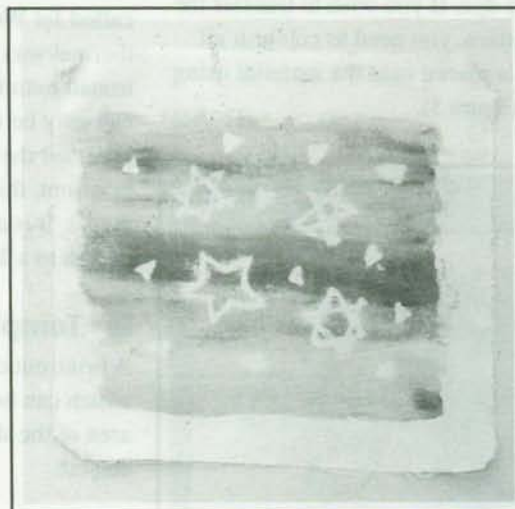


Fig. 3: The pattern was drawn using Crayola wax crayons





Fig. 4: Printing blocks can also be made by tracing round a computer-generated image

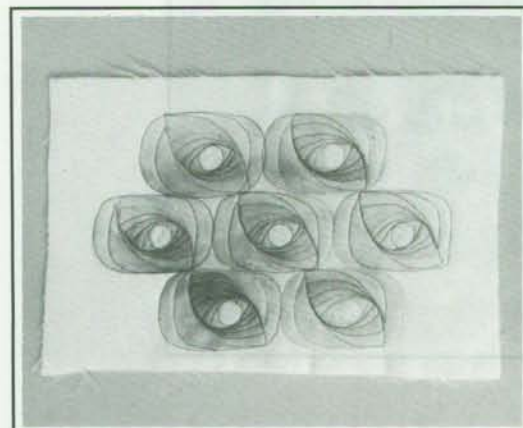
traditional design sheet which is a sheet of squared tracing paper or a piece of software which works in the same way.

### ■ Transfer dyes

It may be possible to obtain a copy of the outline of the design by requesting a fine black outline with no fill. If you are unable to do this, you can trace round the features of your design using the conventional method.

You may just wish to transfer the outline onto your fabric, in which case you can draw over the line with the dye. If you wish to transfer the whole of the pattern, you need to colour it all in. The pattern is placed onto the material using a hot iron (see Figure 5).

Fig. 5: A print-out of this geometric pattern was coloured with Deka IronOn, transferred to polyester satin and then quilted



Crayola fabric dye crayons are clean and easy to use. The Deka transfer dyes need to be painted on and have all the advantages and disadvantages that we would normally associate with painting. The wax crayons can be used for transferring designs to textiles and wood and the transfer dye paints can be used on man-made fibres.

### ■ Textile transfer paper

If the student has a very 'busy' design from a paint program, the use of transfer dyes can be rather tedious and it is better to use a paper called Jet Wear in a dot-matrix, ink-jet or thermal wax printer. The design can then be ironed onto fabric. Unfortunately, the design can only be used once and at nearly £1 per sheet for the paper plus the cost of the colour print-out, this could be a bit expensive for pupils. It is a suitable method for transferring a design to a T-shirt, for example.

### ■ Templates and stencils

A print-out can be cut out to form a template which can be drawn round; alternatively, an area of the sheet can be removed to give a stencil.



### ■ Direct sewing

The print-out can be applied to the reverse of the fabric using a tacking adhesive such as Pritt Stick. The pattern is then sewn from the reverse by hand or machine. This method is particularly good for work with felt but can be used for paper and plastics too.

If the design is photocopied onto tracing paper, it can be tacked to the front of the textile and embroidery can be worked through it, with the tracing paper being torn away when appropriate. This method is suitable for the more advanced embroidery and partly worked examples using this method can be seen in the Elizabeth Hoare Collection of ecclesiastical embroidery in Liverpool Anglican Cathedral.

### ■ Screen printing

Designs can be transferred to a piece of silk before mounting it onto a frame to make a silk screen.

Print Gocco is a new system of screen printing which is particularly suitable for designing and making small cards. Print-outs, of a suitable size, can be placed next to a photosensitive stencil in a specially designed machine to produce a screen which can be used in the same machine for printing. The small version of the machine costs about £100 but the flash bulbs and stencils can only be used once each and so the system is only suitable for producing a number of cards. The system can be clearly related to professional systems and the students can acquire some experience of simple colour separations and learn the problems of unit costs for differing sizes of print runs.

### ■ Photographing the screen

This gives a durable and pleasing record of designs and is worth the effort for designs with which the students feel particularly satisfied. The photograph can be used as part of an item the student makes from almost any material. It can also be transferred to textile using a version of PVA medium which is marketed under the name of Image Maker.

Colour slides can be projected onto a large piece of drawing paper and a copy can be made. This is particularly useful for large projects. It is necessary to use a SLR (single lens reflex) camera on a tripod to get as close to the screen as possible. There must be no reflections on the screen. This may be achieved by placing the monitor with its back

to the window on a dull day. If a blackout is available, so much the better! A flash is not needed.

I have a 13-inch Apple monitor and obtain very good results using 200ASA film with the aperture set at 4.0 and speed at 1/8 second. Valerie Campbell-Harding has had success with 100ASA film, an aperture of 3.5 and a speed setting of 1/8 second. If slides are obtained, these can be projected onto a suitable material and the pattern copied in the medium which is most appropriate for the design.

### ■ On-line data transfer

The pattern may be drawn on the computer screen and sent to a sewing machine, knitting machine or weaving loom using appropriate software.

### ■ Sources of materials

You can obtain materials from the following suppliers:

Specialist Crafts Ltd, PO Box 247, Leicester LE1 9SQ. Tel. 01533 515051

- Encaustic art materials
- Fabric dyes and paints
- Image Maker
- Marquetry
- Print Gocco machine and supplies
- Pyrography
- Transfer Sheets Magic
- T-shirts

Jet Wear textile transfer paper is available from Quill Marketing, 11 Hemmings Close, Norwich NR5 9EH. Tel. 01603 748802

Design sheets are available from Craft Creations Ltd, Units 1-7, Harper's Yard, Ruskin Road, Tottenham, London, N17 8QA

Sewing machines and PC Designer software are available from Pfaff (Britain Ltd), FREEPOST(LE6272) Leicester LE5 6ZS

Weaving and knit design programs can be obtained from Harris Looms, Emmerich (Berlon) Ltd, Wotton Road, Ashford Kent

Some of these items may also be available through your LEA adviser or local stockist.

### ■ References

Beith, Margaret, *Computer-aided Embroidery Design*, Vol. 1, ISBN 0 9520675 1 X Richard Beith Associates, 1993

Campbell-Harding, Valerie, 'Photographing Designs on the Computer Monitor', *Computer Textile Design Group Newsletter*, Issue Number 1, March 1992