

Textile Pattern Design





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Anna Maria López López lives in Lugo, in the Northwest of Spain. She has been working in the graphic, fashion, and Web design fields since 1994. Her designs and digital artwork have been featured in numerous publications. She is also a writer and contributor to design magazines and has taught courses at universities and design schools. Anna Maria is the founder of www.corelclub.org, the largest online community of Spanish-speaking Corel® software users. She is the author of various books about computer-aided design, such as *La Biblia de CorelDRAW® 10* and *Diseño de moda por ordenador*, a bestseller about fashion design by computer. Visit her Web site at www.anna-OM-line.com.

Textile pattern design

In this tutorial, I will show you the workflow for creating a textile pattern design and applying it to a fashion sketch (Figure 1), and in the process, I'll use some of my favorite CorelDRAW tools: the **Polygon** tool, the **Smart fill** tool, and Corel® PowerTRACE™.



Figure 1: The pattern design

Introducing CAFD

In the past, computer graphic design in the fashion world was limited. Today, the workflow for computer-aided fashion design (CAFD) has two approaches:

- Traditional hand-sketching, coloring, and detailing of the model sketch by hand or with bitmap-based software, such as Corel® Painter™.

- Sketch design, technical drawing of garments, textile pattern design, and coloring with vector-based software, such as CorelDRAW. This solution is increasingly preferred because it generates fully modifiable models, high-resolution output, and the smallest size for e-mailing files.

Most CorelDRAW users don't know that CorelDRAW Graphics Suite is the choice of thousands of fashion professionals. CorelDRAW is so popular in the apparel industry because it offers really useful tools for fashion and textile pattern design, such as the **Interactive fill** tool, auto-tracing with color-reduction options, preview of color separations, and of course the superior node-editing tools so necessary for creating flats or technical drawings of the garments.

Designing the rapport

There are many kinds of patterns. They can generally be divided into continuous patterns, such as checks or stripes, and discontinuous patterns, such as animal prints. In this tutorial, we will learn how to create continuous patterns by repeating a fixed rhythm. In the textile industry, the repeated pattern is called a "rapport" or "repeat."

To create more versatile textile patterns, try to use only a few colors. The fewer the colors, the lower the production cost of the fabric will be.

Creating a custom page setup

The first step in creating a pattern design is to set up the page dimensions. I recommend creating a rapport with square dimensions, so in the **Paper width and height** boxes on the property bar, set the width and height to 15 centimeters.

The next step is to save these settings. I use this page configuration often, so I wanted to save it for future use. To do this, click the **Paper type/size** list box on the property bar, and then click the **Edit this list** button at the bottom of the list. In the **Options** dialog box, click the **Save page size** button, and type a name for the page size. I named the page size "Rapport" to use as my custom page setup whenever I design a rapport (Figure 2). I also wanted to clean up the page list by deleting some page sizes that I would probably never use. I did this by selecting the page size from the list in the **Options** dialog box and clicking the **Delete page size** button.

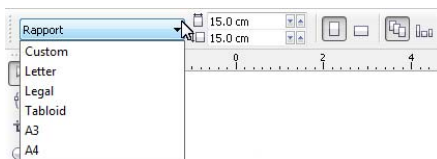


Figure 2: Custom page size

Double-click the **Rectangle** tool in the toolbox to create a square with the same dimensions as the page, and click the **Black** color swatch on the color palette to quickly create the black background for the rapport.

Adding text

With the **Text** tool, type the text “MAKE FASHION NOT WAR.” (In this example, I used the AvantGarde LT Medium font, and I typed the text in the workspace next to the image, to make text editing easier against a white background.) Now, modify the kerning (tracking and line spacing) of the characters by clicking and dragging the horizontal and vertical spacing handles with the **Shape** tool (Figure 3).



*Figure 3: Adjust the horizontal and vertical spacing of the letters with the **Shape** tool.*

When you are satisfied with the shape of the text, select it with the **Pick** tool, and press the **P** key to center the text on the page (it is now on the black background). With the text still selected, click the **White** color swatch on the color palette to change the text color to white (Figure 4).



Figure 4: Center the text on the page, and change the color to white.

The next step is to convert the text object to curves by pressing **Ctrl + Q**. Then, click **Arrange ► Break curve apart**, or press **Ctrl + K**, to break the text apart into individual curves. I like to delete the interior parts of the characters that I will not use anymore (Figure 5).



Figure 5: Remove any interior curves that will not be used in the design.

Creating polygon shapes

Now it's time to add some other elements to our composition. The world of fashion is always a succession of trends and a reinvention of the past with new shapes. So first, let's add a bit of retro style with a Sixties graphic flower. To create this type of retro flower, I use the **Polygon** tool. The first time the **Polygon** tool appeared in CorelDRAW, I spent hours testing it until I discovered a way to create unlimited shapes with it. Since that discovery, anyone who has ever attended my CorelDRAW classes or conference presentations knows that my absolute favorite tool is the **Polygon** tool, used in combination with the **Shape** tool.

To create the retro flower, you first need a polygon. To draw a polygon, select the **Polygon** tool from the toolbox, and then drag inside the letter "O" of "NOT," holding down **Ctrl** to draw a polygon with equal sides.

On the property bar, set the number of polygon sides to 10. Then, select the new polygon, and with the **Shape** tool, draw a selection box around the polygon to select all the nodes (Figure 6).

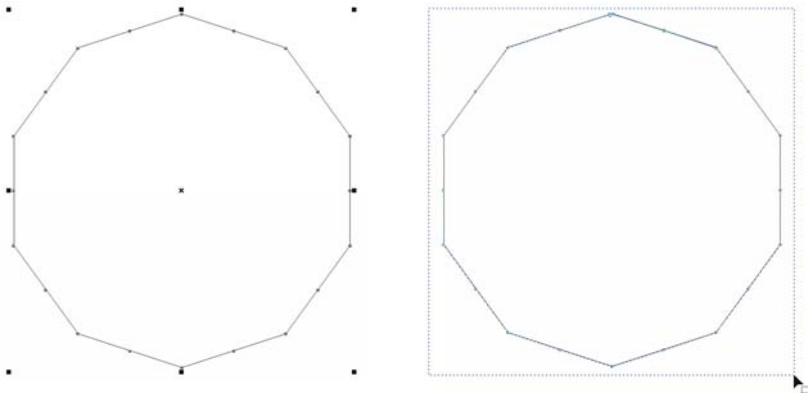


Figure 6: Create a 10-sided polygon, and draw a selection box around it.

Then, click the **Convert line to curve** button on the property bar (Figure 7).



Figure 7: **Convert line to curve** button

Finally, click any side of the polygon with the **Shape** tool, and drag the cursor from inside to outside to discover the new shapes you can create (Figure 8).

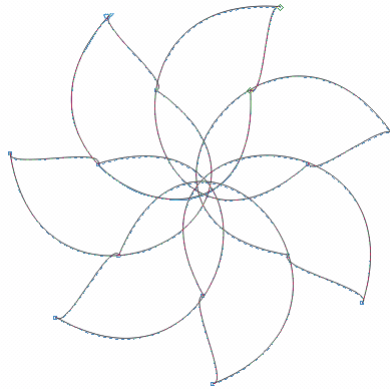


Figure 8: Drag any one of the polygon sides to experiment with new shapes.

The object still remains an interactive polygon — this means that you can continue adding or removing sides until you get the shapes you want. Look at Figure 9: all these graphics were created by using only this technique.

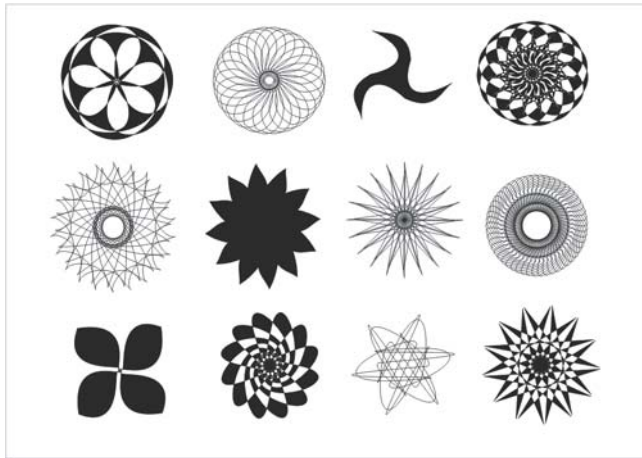


Figure 9: You can create a variety of shapes by using this simple technique.

When you decide which polygon retro shape you prefer to use, fill it with black (Figure 10).



Figure 10: Fill the polygon shape with black.

Adding color

Next, select the letter “O,” and fill it with any color (for this example, I used pink).

In professional textile pattern design, we use PANTONE Textile Color System®, so I enter the RGB values from my PANTONE® for Fashion + Home Color Chooser software in the CorelDRAW **Uniform fill** dialog box. In this example, the PANTONE textile reference is PANTONE 14-2710 TC, and the RGB values are **R: 234 G: 176 B: 202**.

We will add some extra color to the composition, adding another color to the polygon. Until the introduction of the **Smart fill** tool in CorelDRAW, this was a difficult task. Now, you can simply select the **Smart fill** tool, set a color for the fill and outline, and click the interior shapes of the polygon (Figure 11).

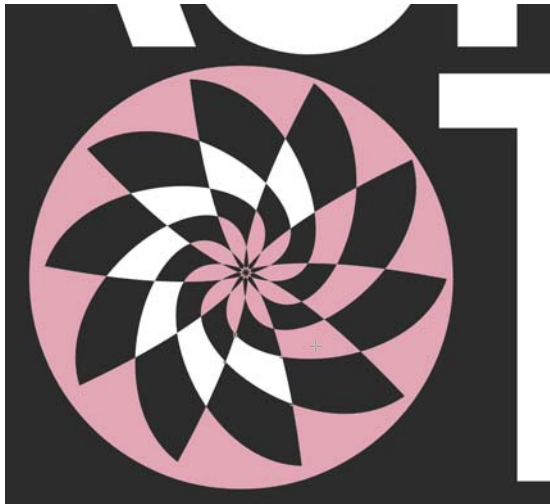


Figure 11: Add color with the **Smart fill** tool.

Tracing a bitmap image

Now it is time to add another graphic style to our fashion composition — in this case, we will add a baroque-style graphic to complete the rapport design.

Instead of drawing the whole baroque motif, we will convert an imported vintage bitmap into vectors with the help of PowerTRACE. In CorelDRAW X4, the imported bitmap always appears with the name of the original image on the status bar (Figure 12). This new feature is really useful, especially for designers who often work with imported graphics.



Figure 12: The status bar shows the name of the imported bitmap.

Before importing bitmap images into CorelDRAW to trace them, I usually prepare them in Corel PHOTO-PAINT®, adding more contrast and often converting the original image to black-and-white (1-bit) mode. This technique helps me produce a more accurate tracing with PowerTRACE.

The next step is to create a vector image of the baroque motif. Click **Bitmaps ▶ Outline trace ▶ Line art**. In the **PowerTRACE** dialog box, enable the **Remove color from entire image** check box. In this version, you can also specify the level of corner smoothness by moving the **Corner smoothness** slider.

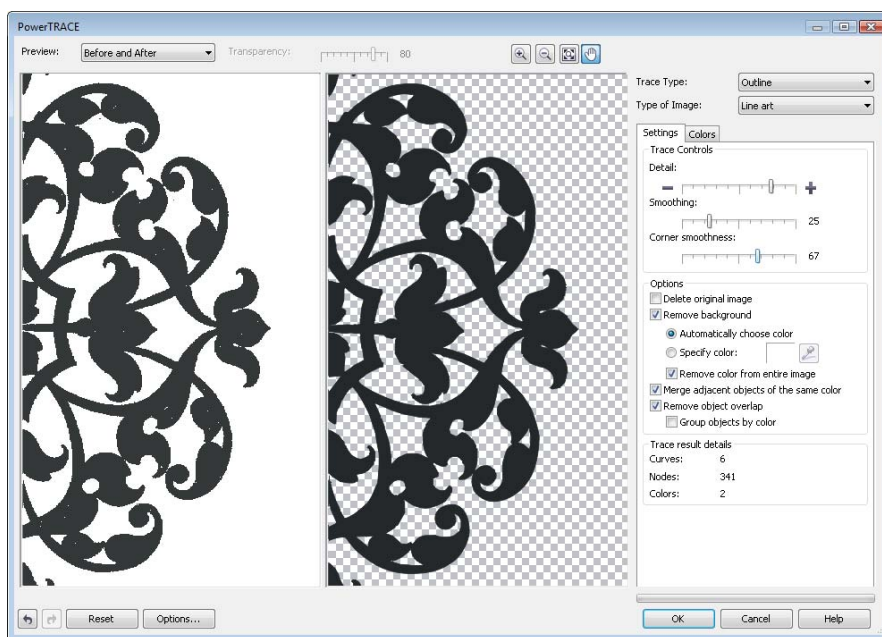


Figure 13: Use the PowerTRACE controls to trace the imported image.

Over the years, I've tested many bitmap-to-vector conversion tools, and the PowerTRACE feature is by far the best vectorization tool I've ever used. With a little experience, you can produce truly amazing results with PowerTRACE.

After you create a vector image of the baroque motif, place it inside the "O" of "FASHION" to complete the rapport design (Figure 14).



Figure 14: The finished rapport design

Creating the pattern

Now is the time to convert our rapport into one continuous pattern. Choose **Tools ▶ Create ▶ Pattern fill**, and click the **Full color** radio button in the **Create pattern** dialog box. While pressing the **Ctrl** key, select the pattern area with the marquee (Figure 15). Be sure to draw the marquee inside the black color, and finally, save the new pattern in the Patterns folder. From this moment on, the pattern is accessible through the **Pattern fill** dialog box.

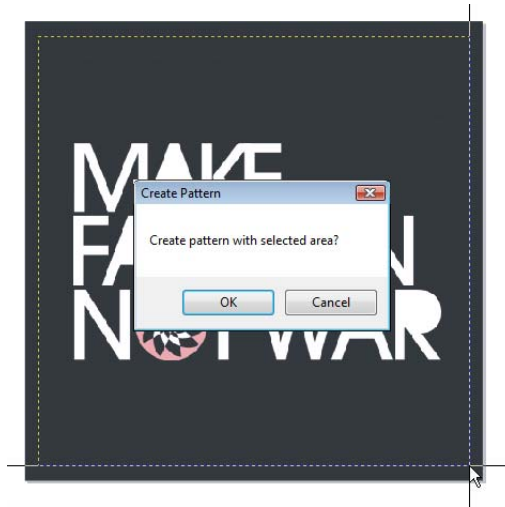


Figure 15: Select the area that you want to use for the pattern.

Before moving on to the next step, I recommend applying the pattern to a rectangle or to a sample fabric simulation. Click the **Fill** tool in the toolbox, and open the **Pattern fill** dialog box. Click the **Full color** radio button, and browse the pattern thumbnails to locate the pattern you saved. In the **Pattern fill** dialog box, you can specify and test optional parameters, such as the row or column offset or the exact rotation of the repeat (Figure 16).

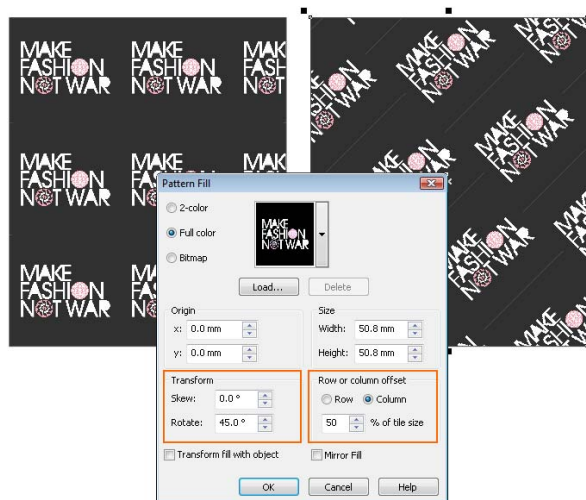


Figure 16: You can specify rotation and other parameters of the pattern.

Preparing the base models and garments

In order to better organize the fashion drawing, I opened the **Object manager** docker and created two layers, which I labeled “models” and “garments.” One layer is for the base fashion model or mannequin, and the other is for the garments (Figure 17). Normally, I work with the “models” layer locked to avoid accidental movements.

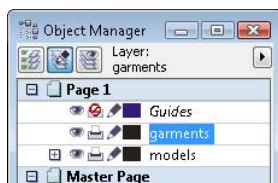


Figure 17: Create one layer for the models, and one layer for the garments.

Layers are very useful for previewing the garments separately from the models (Figures 18 and 19). With CorelDRAW X4, you can also create separate layers for each page of your document.

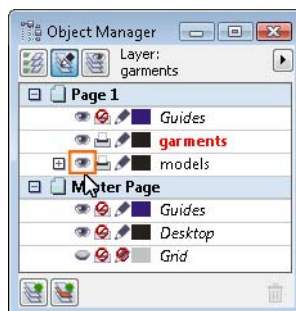
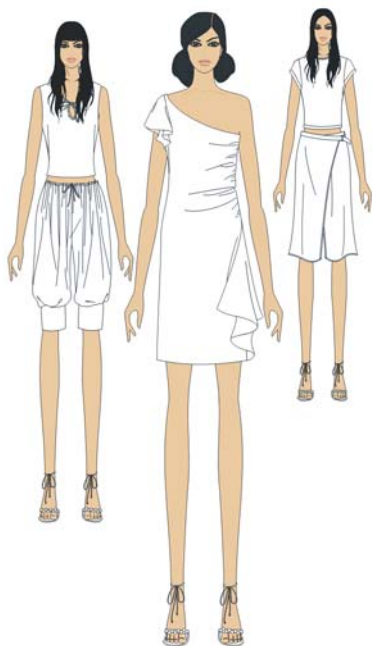


Figure 18: You can view the models and the garments together by displaying both layers.

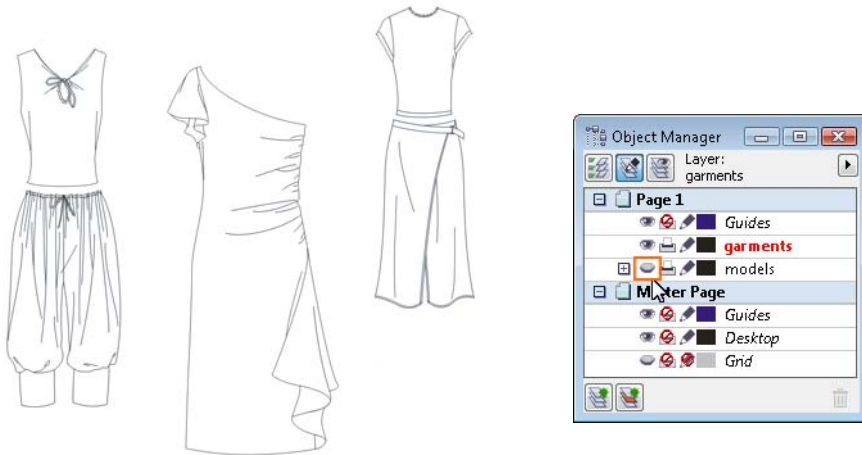


Figure 19: You can view the models and the garments separately by hiding one of the layers.

Applying the pattern interactively

When the base models and garments are ready, select the **Interactive fill** tool from the toolbox, and click the garment element that you want to fill. On the property bar, choose **Full color pattern** from the **Fill type** list box. Open the **Fill dropdown** picker, and click your rapport pattern design (Figure 20).

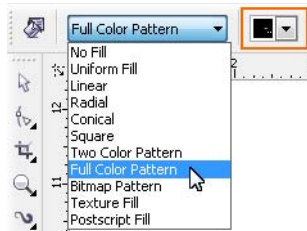


Figure 20: Choose **Full color pattern** from the list, and then open the **Fill dropdown** picker to select the pattern that you created.

Now it's time to adjust the pattern on the garment. First, by dragging the center handle you can find the best position for your pattern. Furthermore, you can rotate or scale the pattern by dragging the rotation and scale handles (the white circle in the corner). I don't like to deform the original rapport design, so I never use the skew handles.

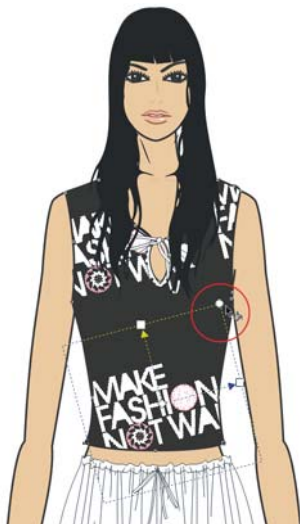


Figure 21: You can move and rotate the pattern and preview the changes in real time.

Personally, I think that the interactive pattern fill tool is directly responsible for the success of CorelDRAW in the fashion design industry. I cannot imagine testing a pattern on a garment without previewing it in real time (Figure 21).

To apply the same pattern to several parts of a garment or to different garments, I click the **Copy fill properties** button on the property bar (Figure 22).

If you want the work to go even faster, remember that you can apply the same pattern to a group of objects.



Figure 22: You can copy the pattern and apply it to other garments, or to a group of objects.

Once you are finished applying the textile pattern to the garments, you can add some fabric samples to your presentation page, including the original color combination and some color variations. To create color variations, you simply open the original file with the rapport design, change the colors, and then create another full-color fill pattern with the mentioned technique.

As you can see, CorelDRAW offers all the tools you need to create professional fashion and textile design in a productive and intuitive way.

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