

14 Using Blends and Contours

Although they're different effects, blends and contours share the common trait of creating many shapes based on control shapes. The additional shapes are dynamically linked to the control object, and the “in-between” objects can vary in size, color, and outline shape, depending on how you set up the effect. Blends and contours are terrific for shading flat color fills in a way that fountain fills sometimes cannot. Additionally, blend objects can be used to illustrate the transition between two objects of completely dissimilar shapes. This chapter takes you through the use of blends and contours so you can create outstanding, intriguing work in addition to what you already know.

Blend and Contour Effects: Similarities with Distinctions

The Blend effects create a series of objects *between* objects using the number of steps you define—an object can be a closed path, a group of objects, or even a line (an open path). The properties of each step can be determined by the objects used in the blend (more on this later in the chapter). The Contour effect also creates additional objects in steps; however, only one object is used to produce a contour. When you imagine a Contour effect, think of a shape surrounded by the same shape radiating outward (or inward) in a concentric pattern, like the circular waves produced when you drop a pebble in a still pond. The following sections explain the properties of the effects you can manipulate, and then you can decide for yourself which effect to reach for when you need a complex graphic or a smooth, shaded fill in an illustration area.

Blending as Illustration Shading

If you've ever tried to add depth to a drawing but the Mesh Fill tool isn't working and a fountain fill doesn't do the trick, the solution is to blend a large shape through transition objects to a smaller object inside the large one. By making, for example, the outer shape darker than the inner one, you can position a soft-edged highlight on an illustration of a shiny object. Similarly, a contour can be used to create a highlight; however, the contour

object should be symmetrical to achieve the highlight effect (for example, an ellipse). You'll often see Blend effects used in illustration work for creating photorealistic illustrations, but regardless of whether the visual content of a drawing is real-life accurate or a whimsical cartoon, with blends you can add depth and suggest lighting and the type of material on an object. The left side of [Figure 14-1](#) shows a drawing of a bottle, but you and other viewers will detect that there's something missing from the illustration. On the right, you can see the finished illustration in Enhanced view in CorelDRAW's drawing window after some Blend and Contour effects were added; a wireframe view showing the blend and contour steps is shown in the center. You'll see how to do this stuff later in the chapter.

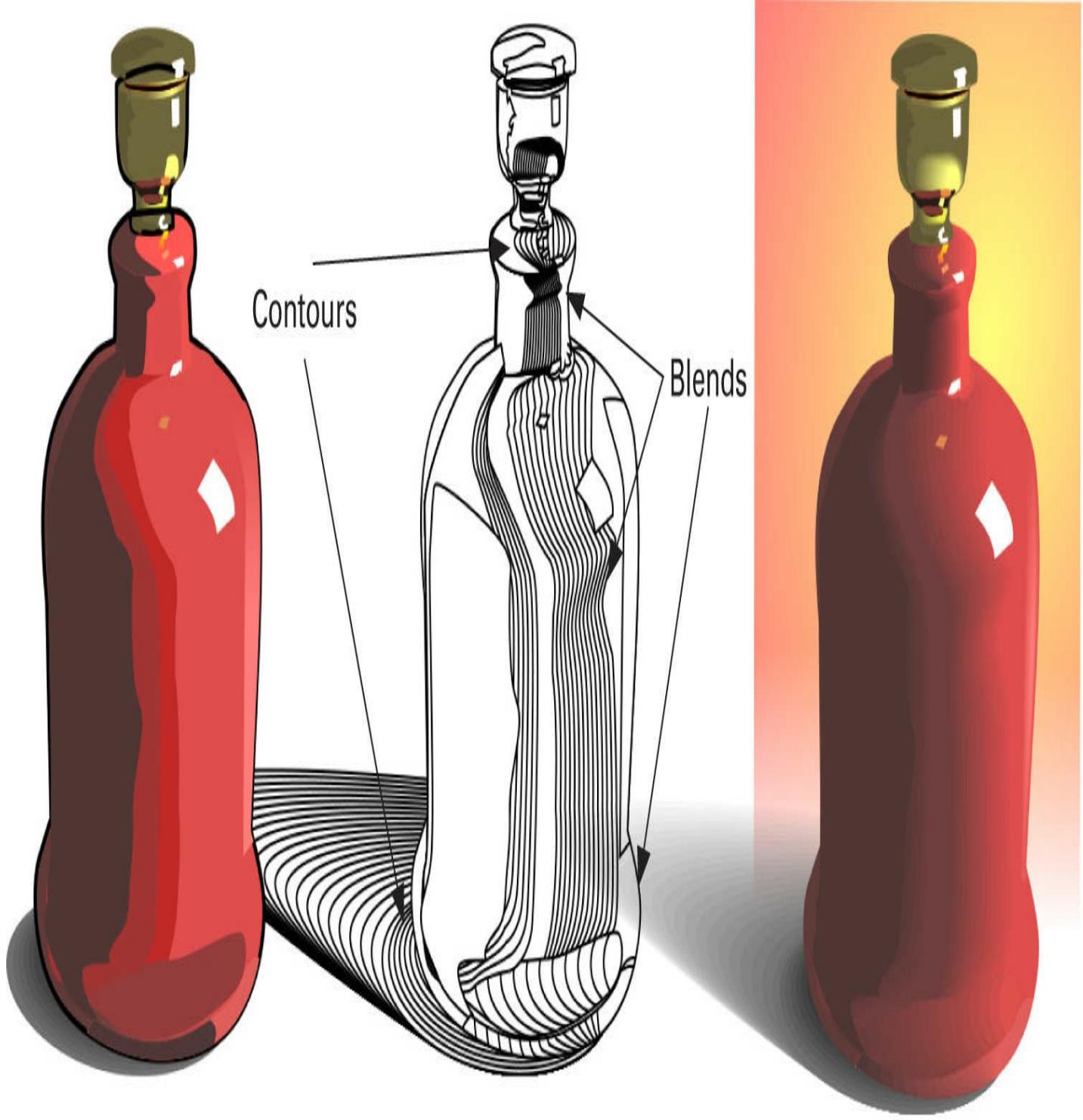


FIGURE 14-1 A drawing, especially a perspective drawing of an object, can appear flat until you add shading with blends and contours.

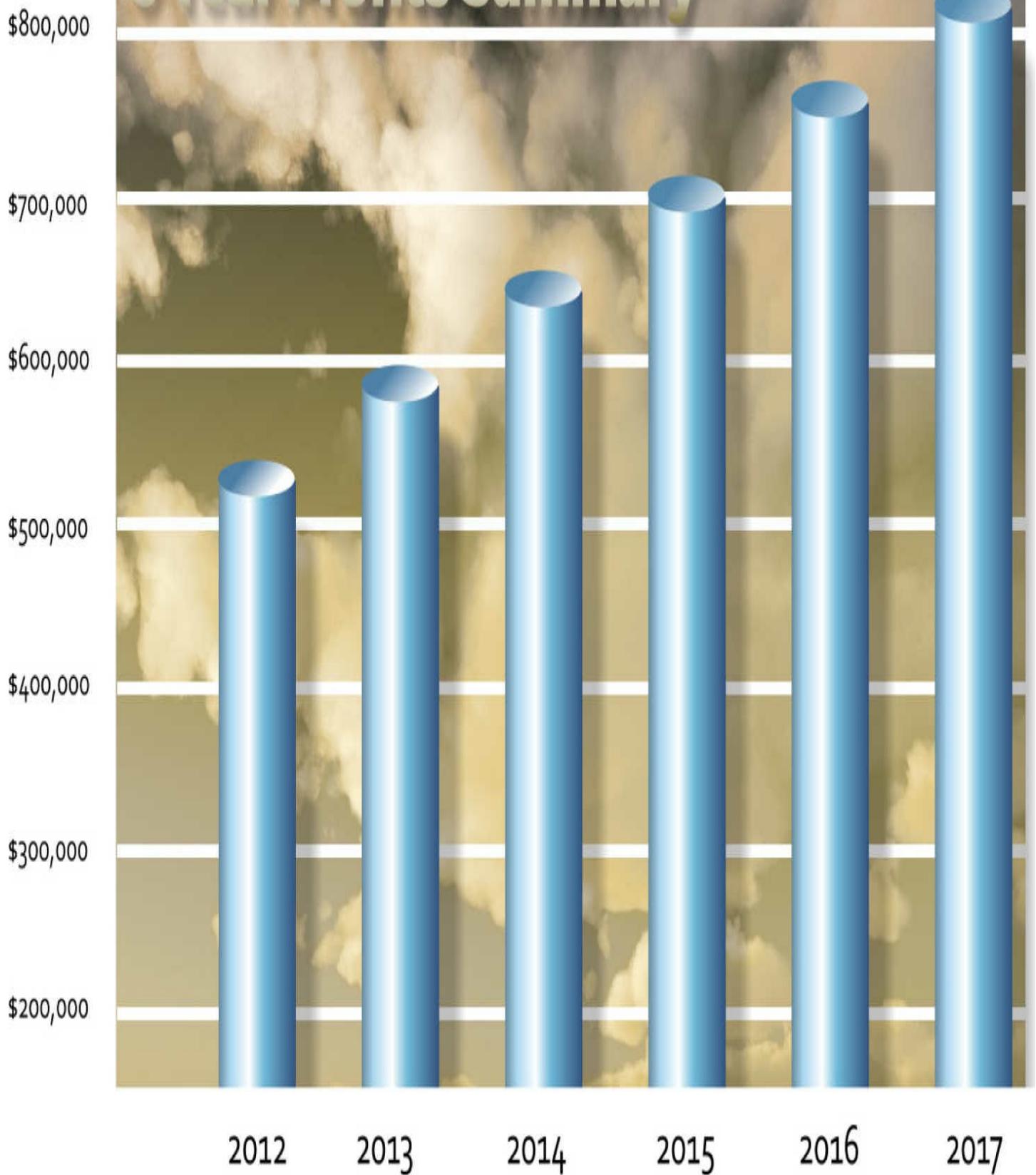
Smooth shading and highlights accomplished by the artistic use of blends create a visual

impression of strength, size, and other qualities that help the audience read an object very quickly: “Oh, that’s a *porcelain bottle*! It looks really bright! And it probably contains perfume that’s too expensive.” Seriously, the more complexity you build into an object’s fill, the more readily the audience will pick up on the complete visual idea and fill in *more* details. And before you know it, you’ve *sustained your audience’s attention*.

Blends can also be used to create a lot of similar objects very quickly; the trick is to blend between similar objects that are quite a distance apart on the page. The following illustration shows an example of two groups of objects blended together to create a bar graph; the reference lines were blended from two identical lines. This is a graph with an even, upward progression. However, when you need to create similar blended objects that *don’t* follow an even progression, you use the Break Apart (CTRL-K) command to break the relationship between the blend control objects. You then ungroup the blended group and edit the individual blended shapes to create a more random transition from object to object.

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The Interactive Blend Tool and Property Bar

The Blend tool can be found in the Toolbox, on top of the Interactive tool group. When you choose the Blend tool, the Property Bar offers options (shown in Figure 14-2) for customizing the effect. By default, 20 intermediate steps are created between two blend control objects.

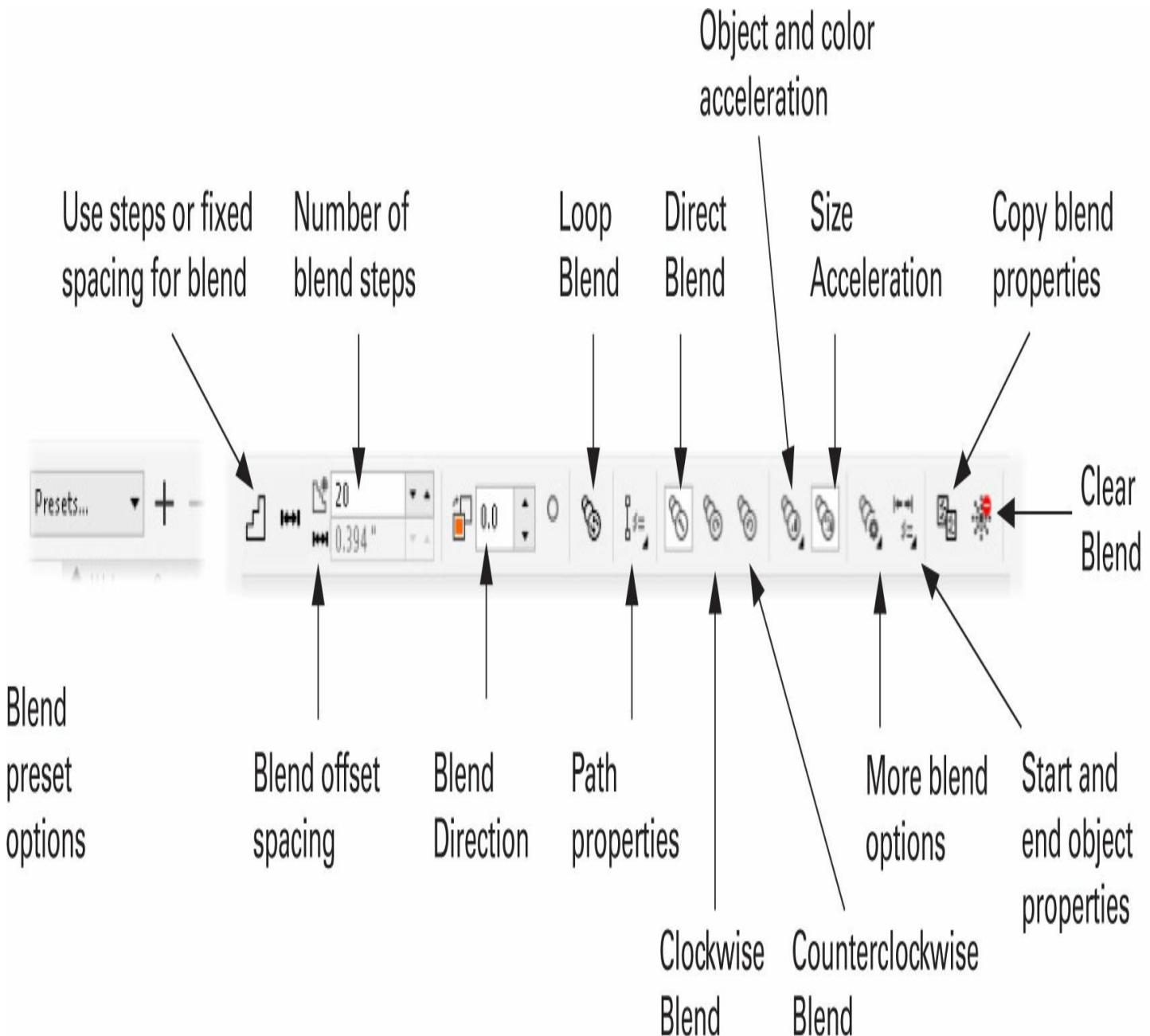


FIGURE 14-2 When the Interactive Blend tool is used, the Property Bar has options to customize your Blend effects.

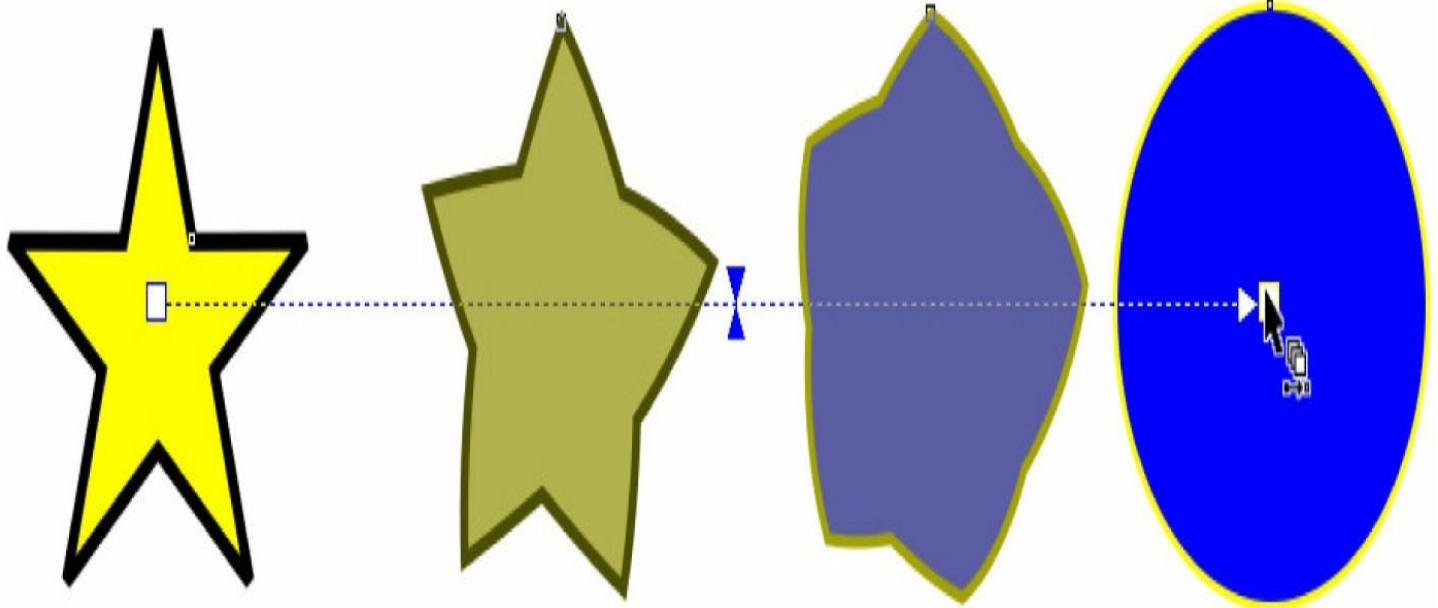
Creating a Simple Blend Effect

You might want to work with similar objects to create blends that look like repeats—rubberstamped copies of the original objects—but there's another creative use for the Blend tool. You can morph totally dissimilar objects, and the resulting blend will probably contain a lot of interesting and useful transitional shapes. Work through the following tutorial to experiment with a basic Blend effect between a star and an ellipse object.

A Basic Blend Between Very Different Shapes

Tutorial

1. Choose the Star tool; it's in the group on the Toolbox with the Polygon tool. Click-drag a star that's about 1" in size at the top left of the drawing page. Fill it with yellow on the Color Palette, and give it a four-point blue outline. First, choose 4 pts. from the Outline Width drop-down box on the Property Bar, and then right-click any blue color well on the Color Palette.
2. Choose the Ellipse tool (F7) and then click-drag an ellipse at the top right of the page. Fill it with blue and give it a yellow outline, but keep the outline width at the default of .5 pts.
3. Choose the Blend tool from the Toolbox. Your cursor changes, and the Property Bar's options are all dimmed because a blend doesn't exist yet on the page.
4. Click inside the star and then drag until your cursor is inside the ellipse. Once you release the mouse button, a series of new objects appears, and the Property Bar comes to life with almost all options available.
5. Twenty steps is too many for this example: type **2** in the Steps field on the Property Bar and then press ENTER. As you can see in the following illustration, the blend shapes make an interesting progression; the outline color makes the transition from blue to yellow; the fill color transitions from yellow to blue; and the intermediate shapes are some interesting stars in stages of distortion as they become the ellipse. These intermediate star-like objects are actually a little difficult to make using the standard drawing tools!



Tip To remove a Blend effect, click the blend portion of the effect to select it and then choose Effects | Clear Blend; or, while using the Interactive Blend tool, click to select the Blend effect portion and then click the Clear Blend button in the Property Bar.

Looking at the Components of a Blend

The Blend effect you built in the previous tutorial creates a fun composition, but to build on your *knowledge*—to be able to create more complex blends—it's a good idea to now examine what really went on, and what properties the objects on your page now have. A two-object blend includes several key components: the original objects become *control objects*; any changes made to either the star or the ellipse will change the blend itself. The effect portion—called a *blend group*—and the *control objects* maintain a relationship as long as the blend exists.

Each of the interactive markers around a Blend effect corresponds to an option in the Property Bar. [Figure 14-3](#) shows the various parts of a two-object blend.

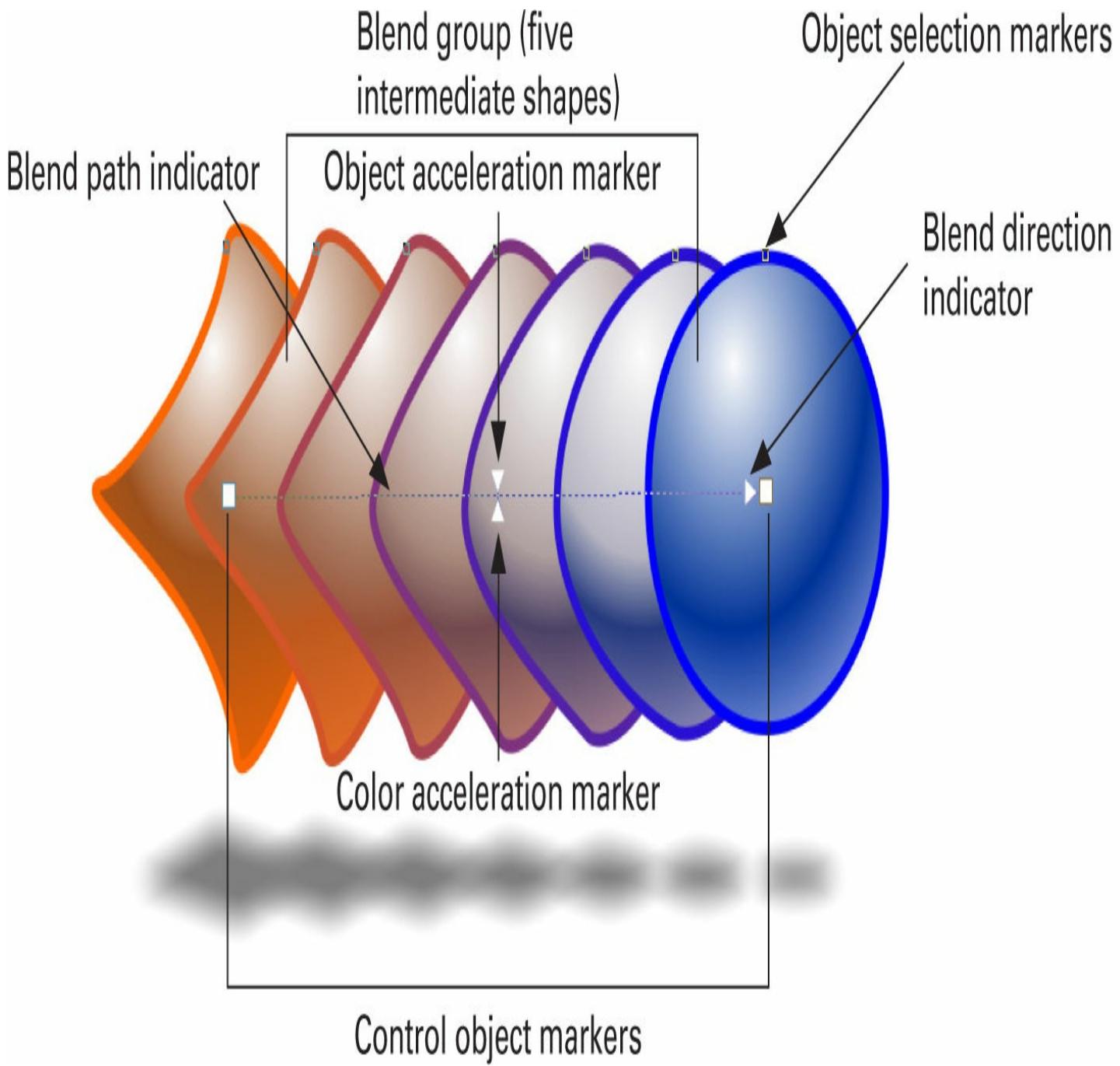


FIGURE 14-3 This blend between two shapes shows the interactive markers controlling the effect.

Editing a blend is a little more of a challenge than making dinner reservations, but significantly less challenging than brain surgery. With the Pick tool, click the blend group to begin editing it using the Property Bar options. Single-clicking selects both the blend and its control objects. To select either control object, click only that control object itself. You'll see that the Status Bar tells you that a "Control Object" (or Curve, Rectangle, or *Whatever*) is selected, confirming that the correct object is selected for editing. Double-click on the blend group with the Pick tool to switch to the Blend tool for making adjustments directly to the group. Your cursor becomes a crosshair as you perform an

operation. Similarly, when you want to adjust the acceleration, hover your cursor over the central color and object markers and then drag when the cursor becomes a crosshair.

When you attempt to do something not allowed with the Blend tool cursor (such as move an intermediate blend object), an international “no” symbol appears at the lower left of the cursor.

Editing Blend Effects

You can create a custom Blend effect by directly manipulating markers and objects with your cursor, setting specific values for options using the Property Bar, and occasionally by using a combination of the two interface elements. The following sections take you through the features you’ll use most often; then it’s on to useful but less frequently used options. Think of this as a journey from mildly amusing, to wonderful, and then on to totally bizarre effects as you progress through these sections.

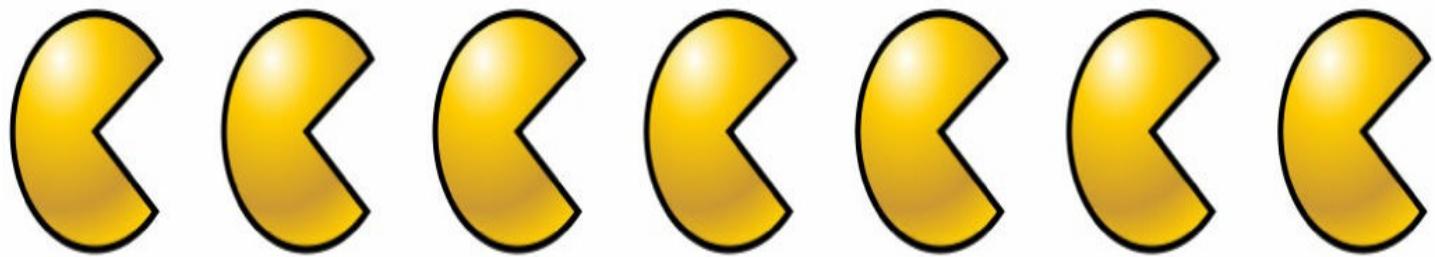
Setting Blend Options

Options controlling a Blend effect can have an impact on each intermediate step of the blend itself. You can change each step’s value, rotation, and color, as well as the acceleration of the blend objects. You can even save the effect you’ve custom-designed as a preset.

Controlling Blend Steps

The number of steps in the blend group can be set within a range of 1 to 999. To set a number of steps, enter a value in the Property Bar Blend Steps num box and then press ENTER. Notice that as you set higher step numbers, the blend control objects might overlap, depending on their closeness. This is an interesting effect, as shown next, but if you need intermediate blend objects that don’t touch one another, you can resize both blend control objects, or move them farther apart from one another.

Five-step Blend effect



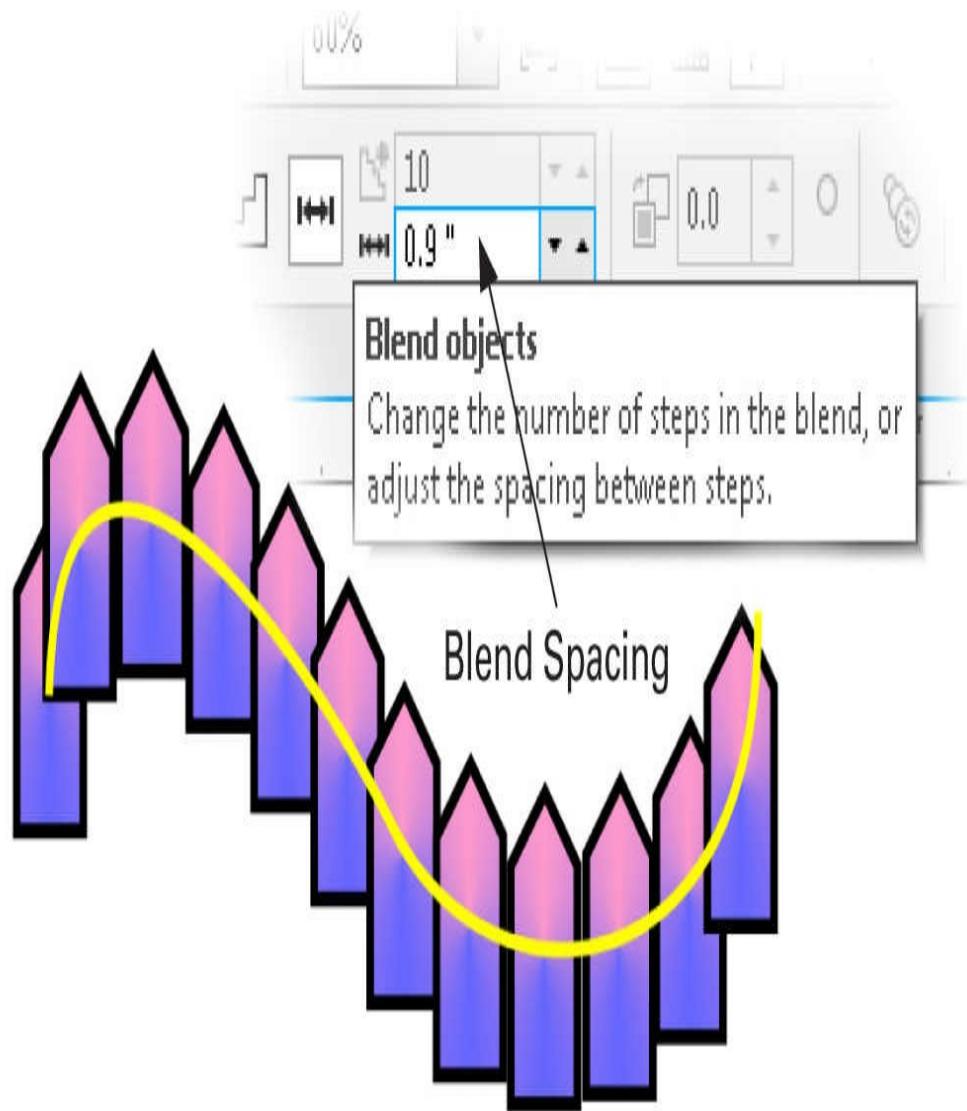
Twenty-step Blend effect



Specifying Blend Spacing

To set spacing values between blend steps, use the Blend Spacing option, which becomes available *only* if a blend has been applied to a path, as shown in [Figure 14-4](#). This limitation is because the distance between the Blend control objects must be fixed by the length of the path. Using the Blend Spacing option in the Property Bar, enter the value to a specific unit measure. CorelDRAW automatically calculates the number of objects required to fit the path's length. Blend Spacing works within a range of 0.010 inch to 10.00 inches, in increments of 0.010 inch. To learn how to blend objects along a path, see “Assigning a Blend Path,” later in this chapter.

Blend applied to a path,
fixed spacing at 0.9 inch;
the result is 10 blend steps.



Blend applied to a path,
fixed spacing at 0.1 inch;
the result is 98 blend steps.

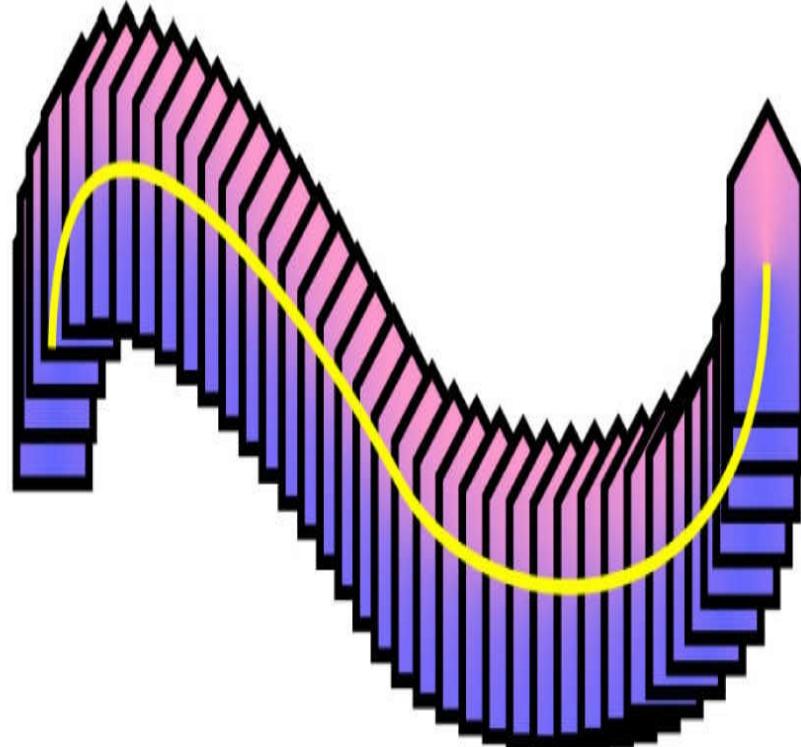
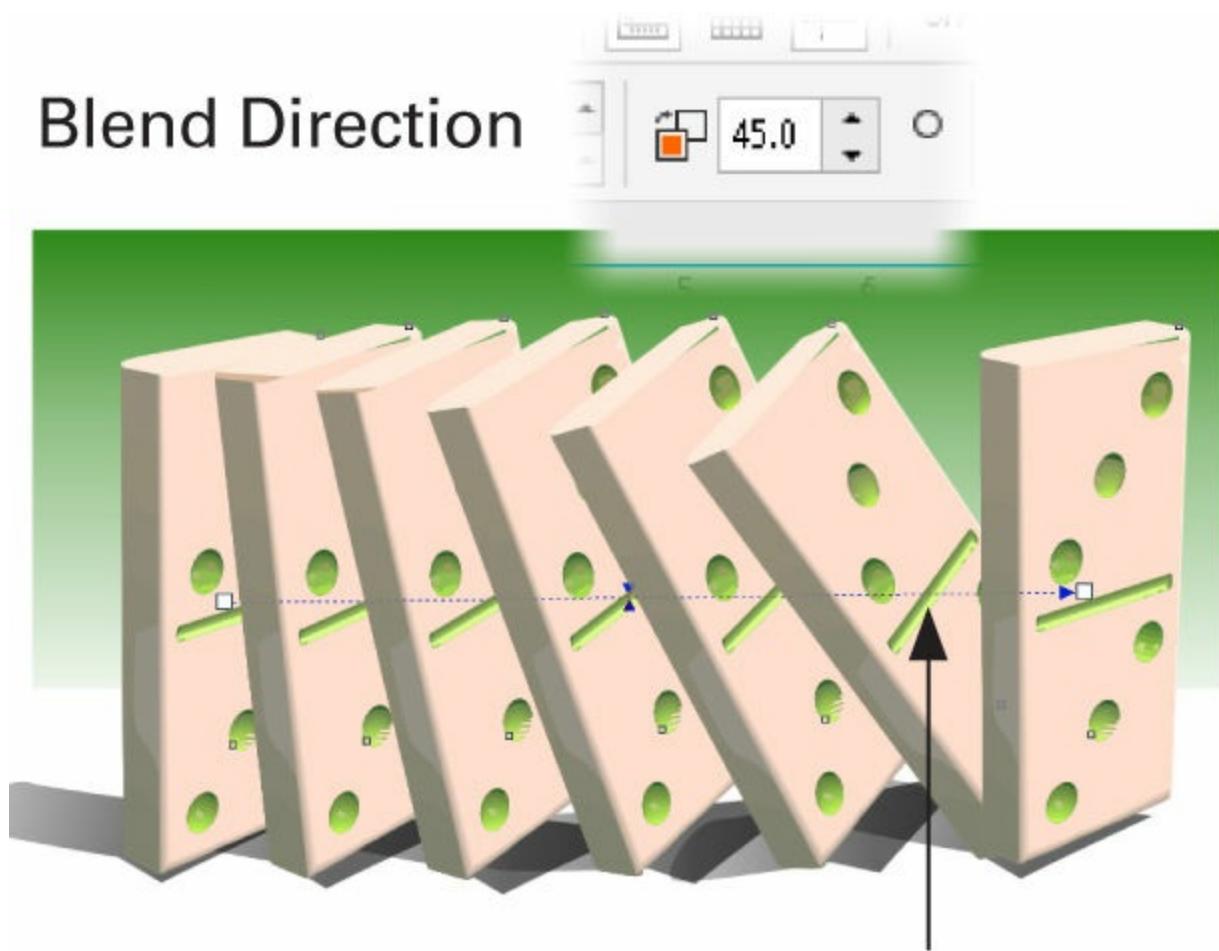


FIGURE 14-4 Fixed spacing between blend objects applied to a path can be controlled using the Blend Spacing feature on the Property Bar.

Rotating a Blend

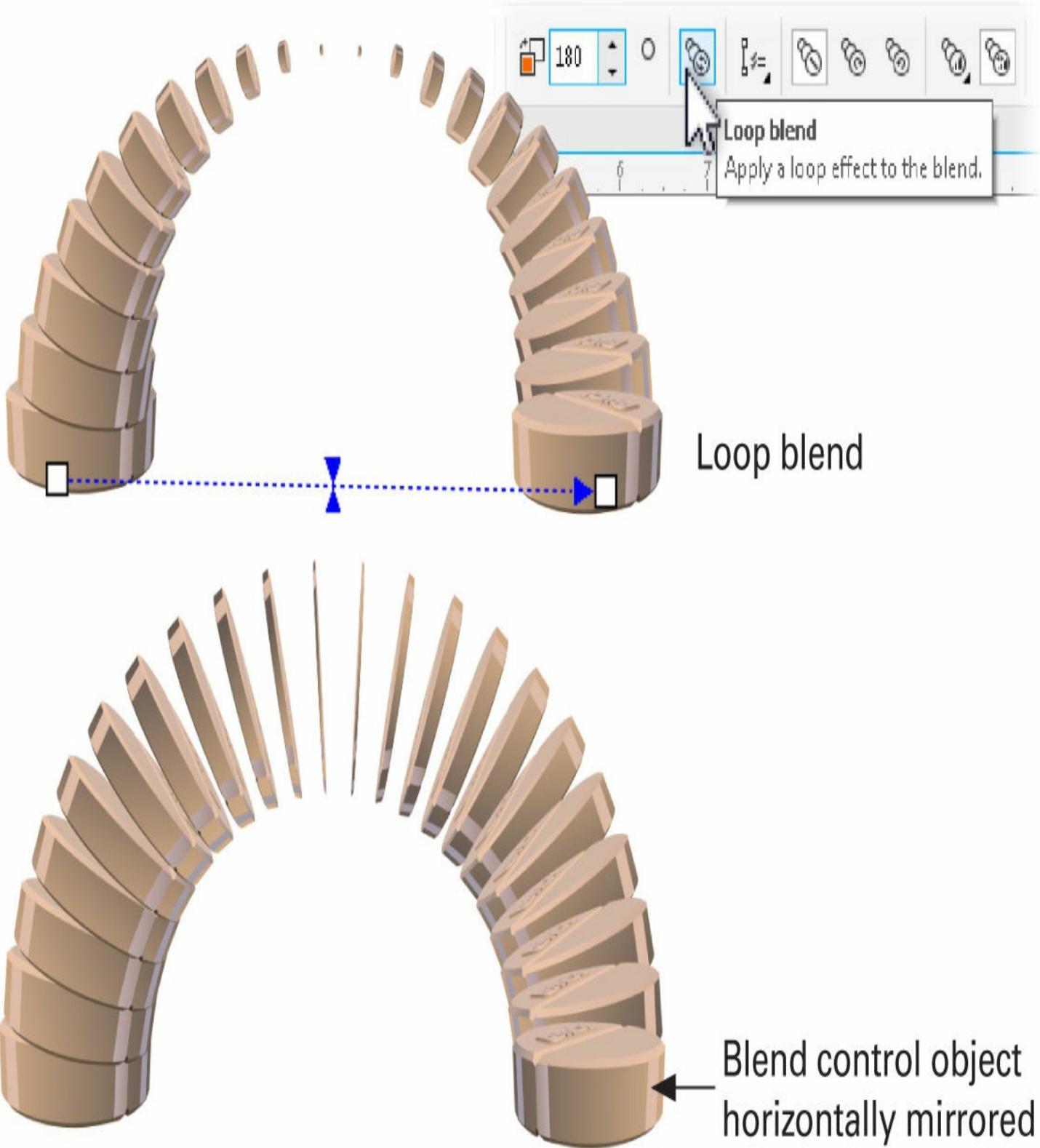
You can rotate the objects in a blend group by fixed degree values using the Blend Direction option, shown here. Enter an angle value (based on degrees of rotation). Positive values rotate the objects counterclockwise; negative values rotate them clockwise. With a rotation value specified, the last object in the blend group is rotated the full angle, with the intermediate steps rotated in even increments starting at 0° rotation—the rotation value of the Start blend control object. This is a handy feature for suggesting action or even an animation. However, rotating a blend cannot be accomplished using a blend on a path.



Last object in a blend group rotated 45°

When Blend Direction is set to anything other than 0° on the Property Bar, the Loop Blend option is available. Choosing the Loop Blend option has the effect of applying both rotation and path offset effects to the blend group. Looping a blend works in combination with the Blend Direction value, offsetting the objects from their original direction and rotating them simultaneously. If you then modify a blend control object, as done at the bottom of the following illustration, you can achieve a different loop effect, sort of like one

of those children's toys that never really got the hang of walking down the stairs.



Changing Color Rotation

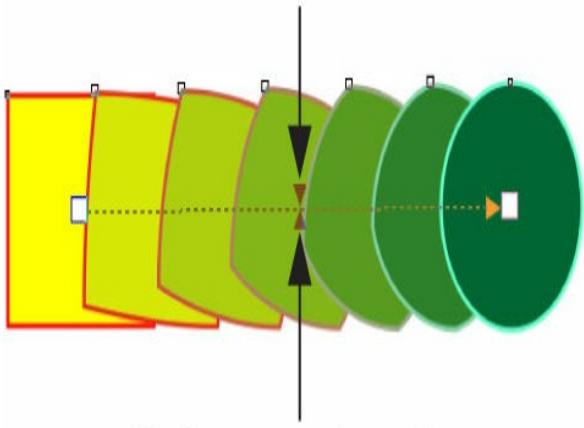
By default, the object colors in your blend group are blended *directly* from one color to the next to create a smooth color transition. However, you can change this using either Blend

Clockwise or Blend Counterclockwise on the Property Bar. If you want a rainbow effect, for example, one control object should be red and the other filled with blue so the Blend Clockwise and Counterclockwise can cycle through the visible spectrum.

Acceleration Options

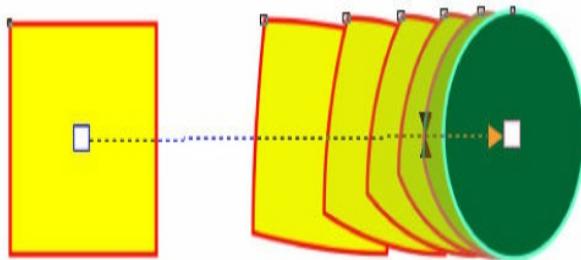
Acceleration increases or decreases the rate at which your blend group objects change shape; think of it as “preferring” one control object over the other. When a default Blend effect is applied, both of these settings are at the midpoint of the blend; the blend group objects change in color and size evenly between the two control objects. You change object and color acceleration rates simultaneously (the default) when the two options are linked, or make acceleration changes independently of one another by clicking the Unlink Acceleration option from the Object and Color Acceleration buttons on the Property Bar. In this illustration, you can see linked acceleration to the right, and then at the bottom, to the left control object.

Object acceleration marker

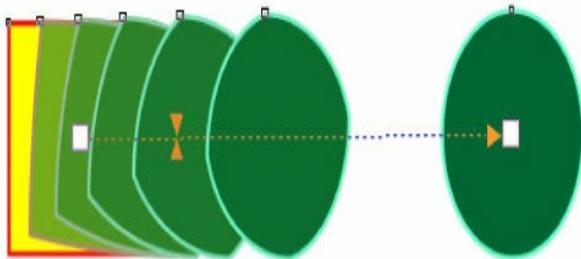


Color acceleration marker

UI screenshot showing the Blend panel with the 'Acceleration' tab selected. It displays two sliders: 'Object' (blue) and 'Color' (grey). A 'Link' button is shown connected to the Color slider. An 'X' button is in the top right corner.



UI screenshot showing the Blend panel with the 'Acceleration' tab selected. Both 'Object' and 'Color' sliders are linked, indicated by a blue lock icon next to the Color slider. An 'X' button is in the top right corner.



UI screenshot showing the Blend panel with the 'Acceleration' tab selected. Both 'Object' and 'Color' sliders are unlinked, indicated by a grey lock icon next to the Color slider. An 'X' button is in the top right corner.

Moving either slider in this pop-out box to the left of the center position reduces (slows) the acceleration from the Start object toward the End object of the Blend effect. Moving either of the sliders to the right increases the acceleration. Interactive acceleration markers can also be used to adjust these values. While the two rates are unlinked, changing the Object Acceleration affects only the progression of shapes.

With Object Acceleration sliders unlinked, changing the Color Acceleration affects only

the change in progression of the fill and outline colors between the two objects. Moving the sliders, or the interactive markers, left or right changes the acceleration of the color change.



Tip Changing the Color Acceleration also affects the width properties applied to outline paths of objects.

Using Blend Presets

It's taken up to now to learn how to change the blend steps, rotation, color, and acceleration rates of Blend effects; naturally, you want to be able to save an elegantly customized blend so you can apply it to other objects in the future. Saving your hard work as presets is accomplished through the Blend Preset list when a blend is selected; you can also tap into some nice *existing* presets on the list.

Blend presets are used the same as other CorelDRAW preset controls and can be saved and applied to two or more different shapes.

Creating Extraordinary, Complex Blend Effects

More advanced blending can solve illustration challenges when a standard, direct blend can't. The following sections show you how to create *multipoint blends*, how to *map* blend control object *nodes*, and how to apply blends to paths. Yes, this is the "good part" of this chapter!

Creating Compound Blends

A simple, straightforward direct blend from one object to another can be split so that one or more of the child objects in the blend group becomes another control object. Once you have a "mezzanine" control object between the *original* control objects, you can reposition it on the page—which can make a blend look like Pablo Picasso's idea of a caterpillar. You can also recolor the new control object as well as edit it with the Shape tool.

You now have *two* different stages of blends within the compound blend object: a transition from the start point to the point you created, and then a transition between this point and the end-point control object. There are two different ways to achieve the same goal when you want to add a transition control point within a simple blend:

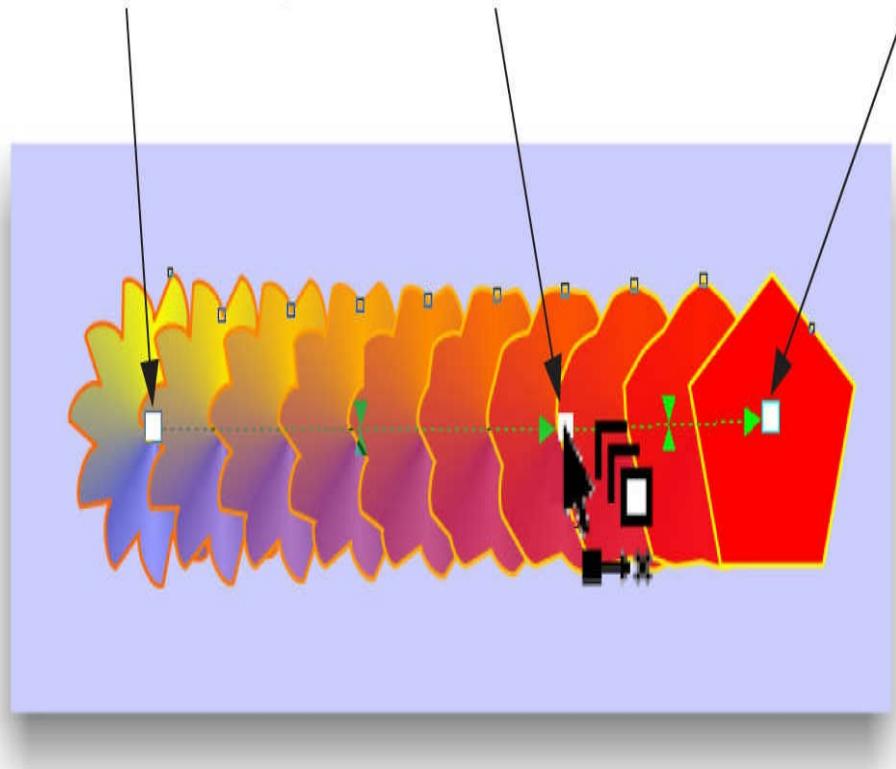
- Double-click a blend group object. This is an imprecise method, especially if there are more than 10 blend steps spaced tightly together.
- Click the More blend options pop-up button on the Properties Bar and choose Split

Blend. Your cursor turns into a targeting cursor and you can now pick the exact child object in the blend that you want promoted to an intermediate control object.

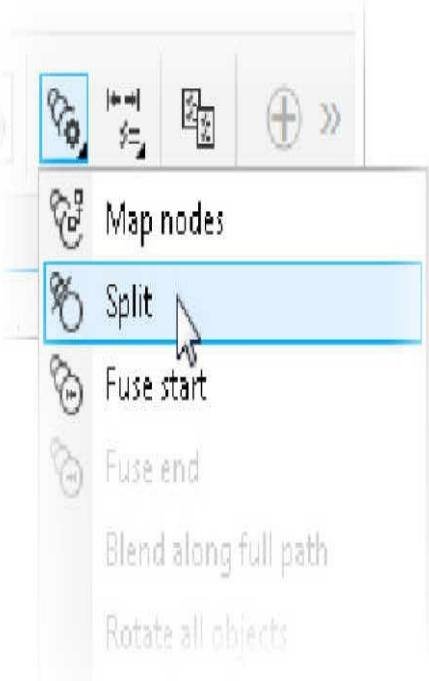
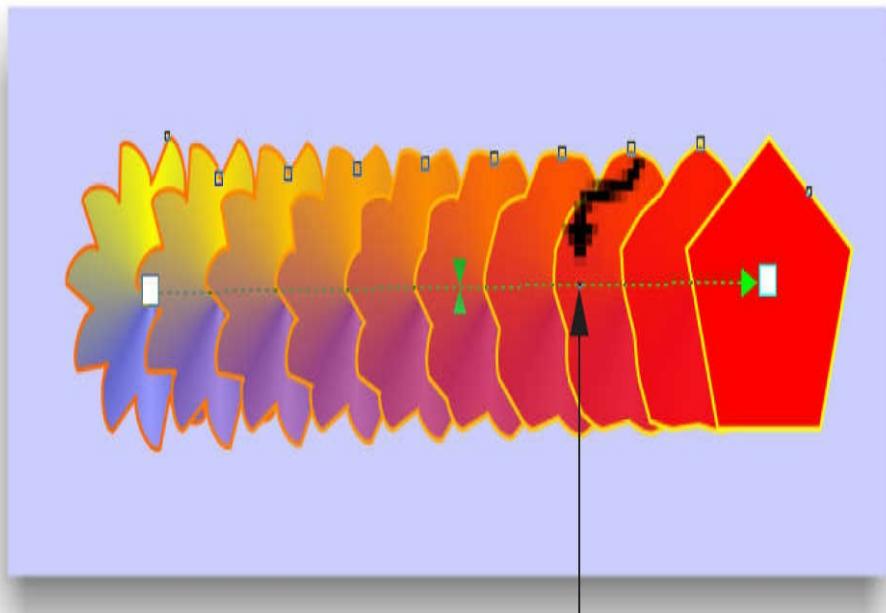
Here is a visual of both processes:

Method 1: Double-click a blend

Control object group object to create a split. Control object



Method 2: Choose Split and then use the targeting cursor on a blend group shape.

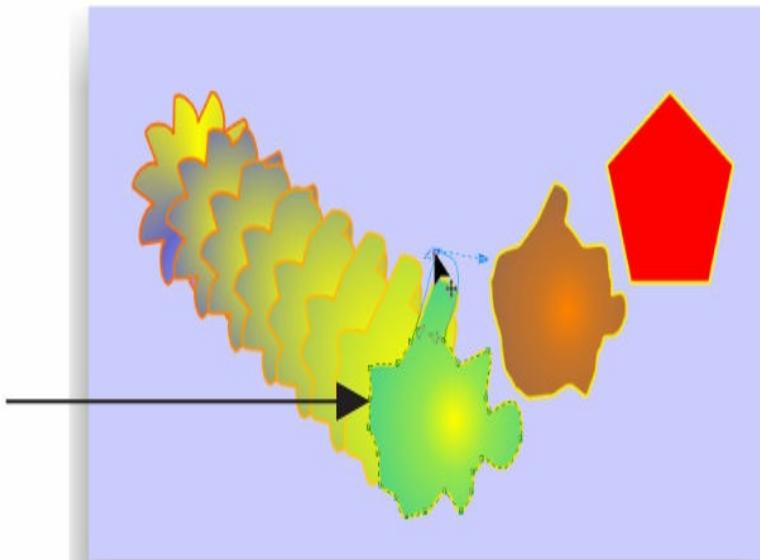


Targeting cursor

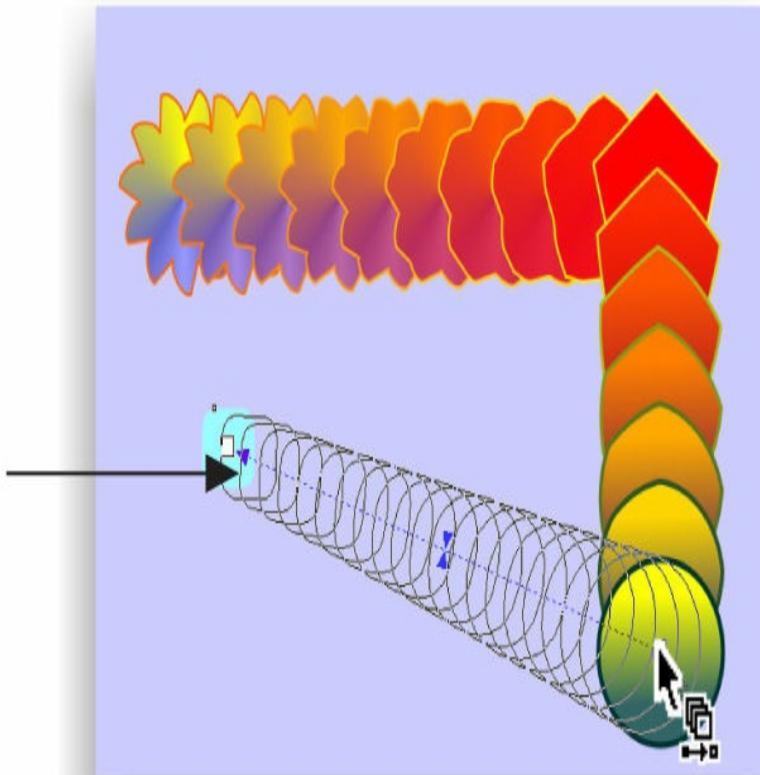
After you've created a split in a blend, you can edit the intermediate control object—change its fill, change the path with the Shape tool, reposition it on the page, scale it... you name it. To perform edits on the new control object, deselect the compound path—choose the Pick tool and then click on a blank area of the page—then select the new control object and perform your edits. At the top of the following illustration, you can see that splitting and then editing the new control object affects all the child group objects on either side of the control object.

You can split a blend in as many places as you have child blend objects. Alternatively, you can add a new shape to the blend by dragging from any new object you've created to any control object on the blend, while using the Blend tool. You'll achieve some wonderfully bizarre effects should you choose to blend between a new object and the middle of a compound blend, but it can be done. At the bottom of this illustration, you can see a rounded-corner rectangle being blended to the end of a complex blend.

Intermediate blend
control object from split



With Blend tool, drag from the new object to blend, to add to the compound blend.



Fusing a Blend

Fusing, as the term applies to CorelDRAW blends, is the opposite of splitting, and it applies to a complex blend made by adding an object to a direct blend. When you apply a fusing action to a blend, you remove a control object. The resulting blend adjusts to reflect the new lack of a control object and its properties. To remove an intermediate control object you created by double-clicking with the Shape tool, you double-click this marker

with the Blend tool, and it disappears. To remove, for example, a control object that's part of a complex blend created by adding a control object, you can click the More Blend Options flyout button on the Properties Bar and choose Fuse (Start or End), depending on which end of the blend you added a control object to.

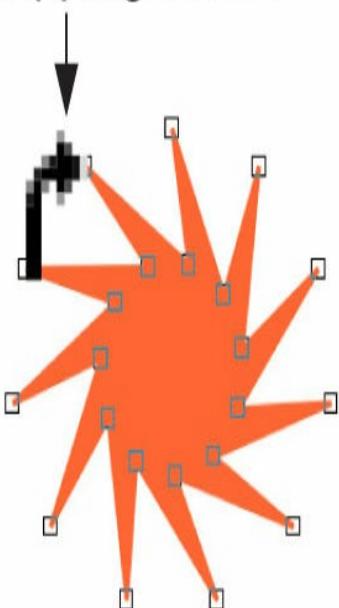
Mapping Control Object Nodes

When a blend is applied, the blend group is built of a series of intermediate objects between the control objects. When you use two completely different shapes as control objects, the chances are that they won't have the same number of nodes connecting path segments; additionally, the position on the page of the first node you draw is usually arbitrary, depending on your style of drawing. By default, CorelDRAW blends two different objects using *node mapping*: the Blend effect makes an assumption that the blend should start with the first node on the Start object and should end at the first node on the End object, and that all objects in the blend itself make the transition based on the same node position on the page as the Start and End control objects.

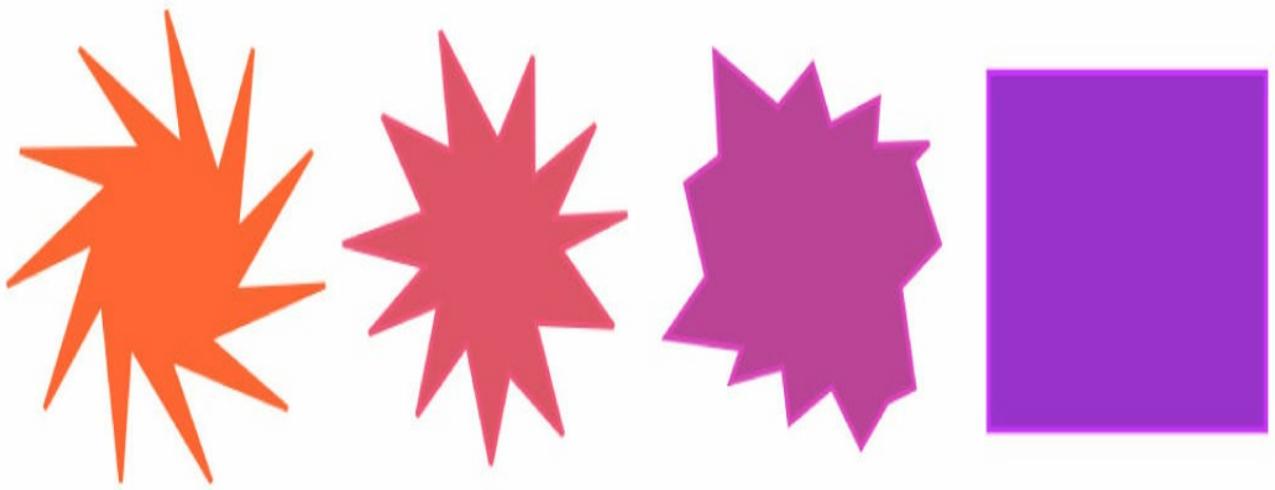
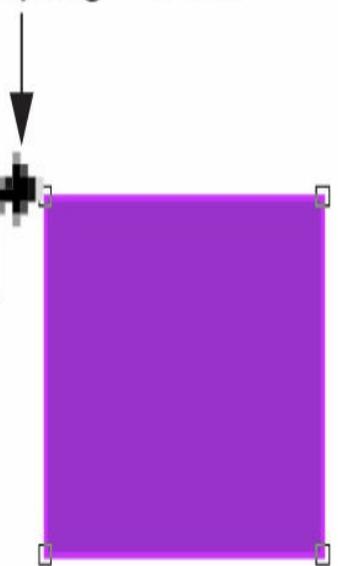
Occasionally you might get a blend that looks like a parade of crumpled sheets of paper, or something similarly nasty—it's interesting, but not what you had in mind.

Fortunately, you can match the nodes of your control objects in a few clicks. To map the nodes in a blend, click the Miscellaneous Blend Options button and then click the Map Nodes button. The cursor becomes a targeting cursor, which is your signal to click the nodes you want matched. Node mapping is a two-step operation: look for oversized nodes showing on one of your control objects and then click on one with the targeting cursor. Then click on the corresponding node on the other control object, as shown in this illustration.

Node mapping cursor



Node mapping cursor



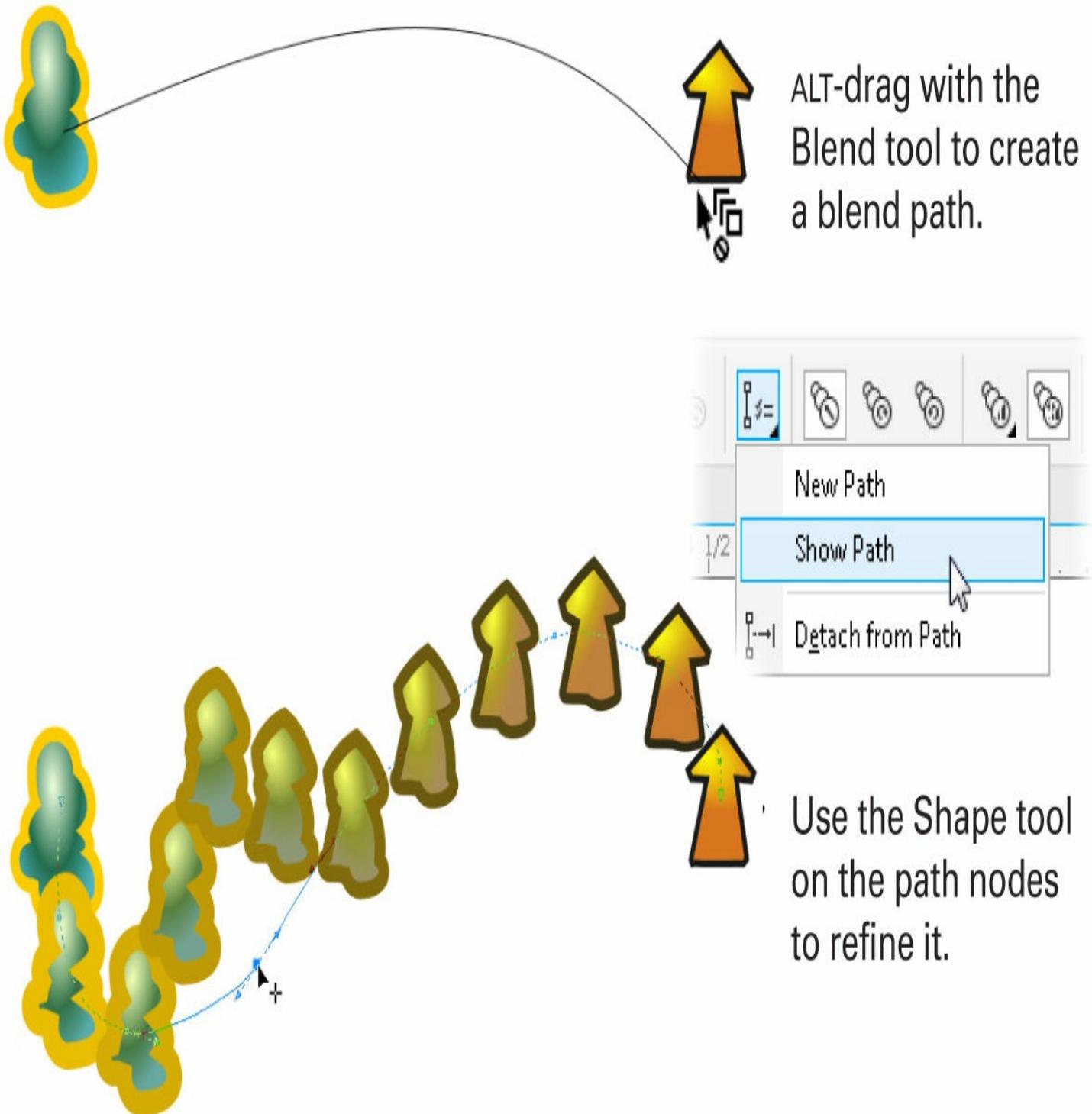
Note Node mapping is unavailable if a Blend effect has been split into a multipoint blend.

Assigning a Blend Path

Objects can be blended along a path either by using a path you draw before the Blend operation or by ALT-dragging from one object to another with the Blend tool while nothing is selected on the page. Blend objects on a path can also be rotated, offset from the path, and set to fill the full path or only part of the path.

You can see in the following illustration an example of the “ALT-drag a path” technique.

If your path is a little shaky or otherwise imperfect, first choose the Shape tool from the Toolbox and then choose Show Path from the Path Properties pop-up on the Property Bar. Once you can see the path, you can edit it, just as you'd do with a drawn path, using the Shape tool.

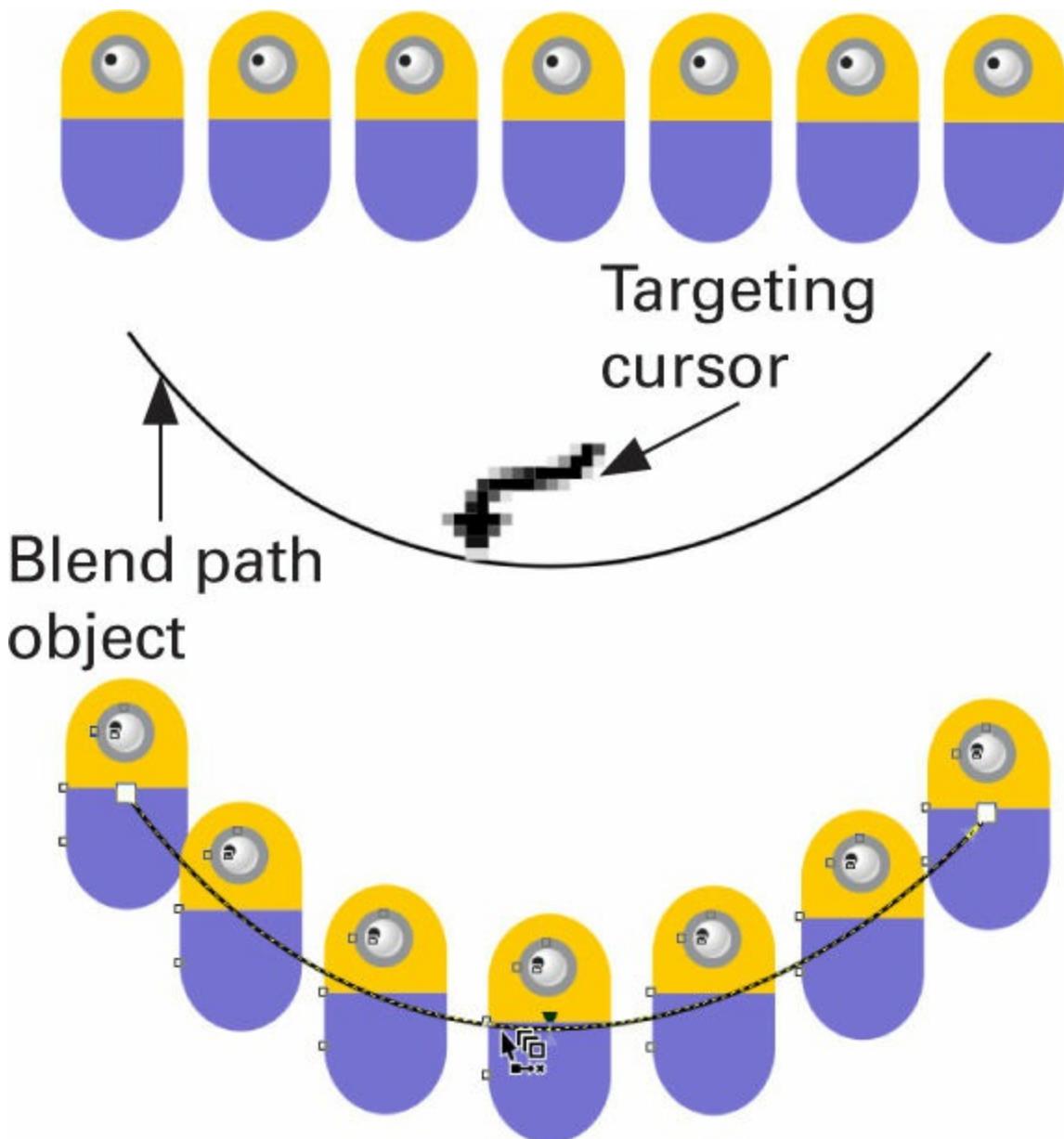


The following tutorial takes you through the more studied and precise approach to binding a blend to a path, again using the Path Properties pop-up.

Blending Objects Along a Path

Tutorial

1. With a Blend effect already created and an open or closed path in view on the page, choose the Blend tool and then click the blend group portion of your effect to select it, not the control objects on either end of the blend.
2. Click the Path Properties button and then choose New Path. Notice your cursor changes to a targeting cursor.
3. Click the open or closed path with this special cursor; the blend now follows the path you clicked. Notice also that the blend has changed position to align with the path exactly where it's positioned. The Blend effect and the new path are featured top to bottom in this illustration.



Choosing New Path while a Blend effect is already applied to a path lets you assign a new and different object as the blend path. To remove a Blend effect from a path, use the Detach From Path command. If the blend includes so many steps that the path is hidden—or if the path itself is not visible because it has no outline color applied—use the Show Path command to select and highlight it for editing. Show Path is also a good command for editing a path you created. Using the Shape tool as your current tool, use the ALT-click-drag technique described earlier. Remember: as long as the path is visible (in any View mode), you can change its course by using the Shape tool to edit the path's nodes.



Tip If you don't want a path to be visible in the final effect, set its Fill and Outline colors

to None. This way, you can edit the path later.

Rotating Blend Objects

Objects set to follow a path do so using their original, unaltered orientation by default. For example, a blend involving vertical lines when blended to a path results in the centers of objects aligning with the path, but their orientation will remain vertical. If you need your blend group objects to *align* with the orientation of the path itself, choose the Rotate All Objects option in the Miscellaneous Blend Options pop-up menu in the Property Bar, which is available when a blend on a path is selected.

Doing this applies a rotation value to each of the objects in the blend group to align with the direction of the path.

Blend Along Full Path

If the path you've applied your Blend effect to is the right size and length to cover your blend completely, you may automatically set the blend group and control objects to cover the entire path. To do this, choose the Blend Along Full Path option from the Miscellaneous Blend Options pop-up. Using this option, you can move the center origins of the control objects in the blend to the first and last nodes of the path. The illustration here shows the effect when a blend is applied to an open path.



Position of original control objects



Objects blended along a path



Blend Along Full Path chosen



Tip Once a blend group is bound to a path, you can manually space the blend objects by click-dragging the Start control object or the End control object with the Pick tool. This technique might not get you where you want to go 100 percent of the time, but this is a good feature for visualizing how you want spacing to occur in a blend.

Controlling Blend Object Path Alignment

When a blend follows a path, the point at which all objects align with the path is determined by their center origin. The *center origin* is where all objects are rotated during any default rotation. Controlling how a blend aligns to a path is one of those hidden features you won't find in any dialog or Property Bar. Instead, the center origin is moved

manually using the Pick tool, with object rotation and skew handles in view. By moving the center origin, you can control how the objects align to the path.

To perform this alignment operation, you click a blend control object to select it, click again to reveal the center origin and rotation handles, and then move the center origin point. The blend moves in the opposite direction. This trick is a very quick way to reshape and move a blend along a path with a minimum of steps.

Working with Multi-object Blends

Blending between *more* than two objects can produce an effect quite unlike splitting a blend, and it's just as easy to do. You click-drag between different objects on your document page. Each time you do this, a new blend group is created. The dynamic link is maintained between all objects in a multi-object blend, which means you can change control objects, and the blends are instantly updated. [Figure 14-5](#) shows two Blend effects applied to three different objects with the multi-object blend defined in different directions. The one on the left is linear, and the one on the right converges from points to the circle object.

Control object

Control object

Blend sequence

Control object

Control object

Blend sequence

Control object

Control object

FIGURE 14-5 These three shapes are blended in different sequences.



Tip The order in which objects are created also affects the blend appearance. The object created last will appear on top of the blend group regardless of the click-drag direction. Because of this behavior, you can move an object forward or back one or more positions on its layer (CTRL-PAGE UP or CTRL-PAGE DOWN) to alter the blend's appearance.

Each blend of a multi-object blend is considered a separate effect; each has its own control objects with defined Start and End blend objects. You can change the Start and End blend objects using the Starting and Ending Objects Properties pop-out menu commands on the Property Bar. The Start and End blend objects are the key to making blends that change shape all over the place in very intriguing patterns. And the key to selecting blend groups within blend groups is to hold CTRL and then click on a subgroup within the compound object, and then the options on the Property Bar can be accessed.

With a blend selected, you first need to locate the Start or End blend object—choose either the Show Start or Show End command. Choosing New Start changes the cursor to a targeting cursor, so you can then unlink the Blend effect from one object and target a different one. Doing this creates a new effect each time a different object is targeted. Choosing New End works similarly.

After a blend has been made, you might need to dismantle it and break the link between the control objects. This is easily done, but keep in mind that it can't be reversed without using the Undo command (CTRL-Z). To dismantle a blend, choose the Pick tool, right-click the blend group portion, and choose Break Blend Group Apart from the pop-up menu (or press CTRL-K). The control objects then become separate objects, leaving the blend intermediate objects grouped. To further dismantle the arrangement, select only the blend group by using the Pick tool and then choose Arrange | Ungroup (CTRL-U).



Tip If you prefer working close to your design on the page, you can use the Blend docker (Windows | Dockers | Effects | Blend). Detach it from the edge of the workspace, and float it near your work.

Tapping into Contour Effects

Contour effects instantly create perfect outlines of shapes or paths by the dozens or even hundreds. The result is similar to viewing a topographical or *contour* map, hence the name.

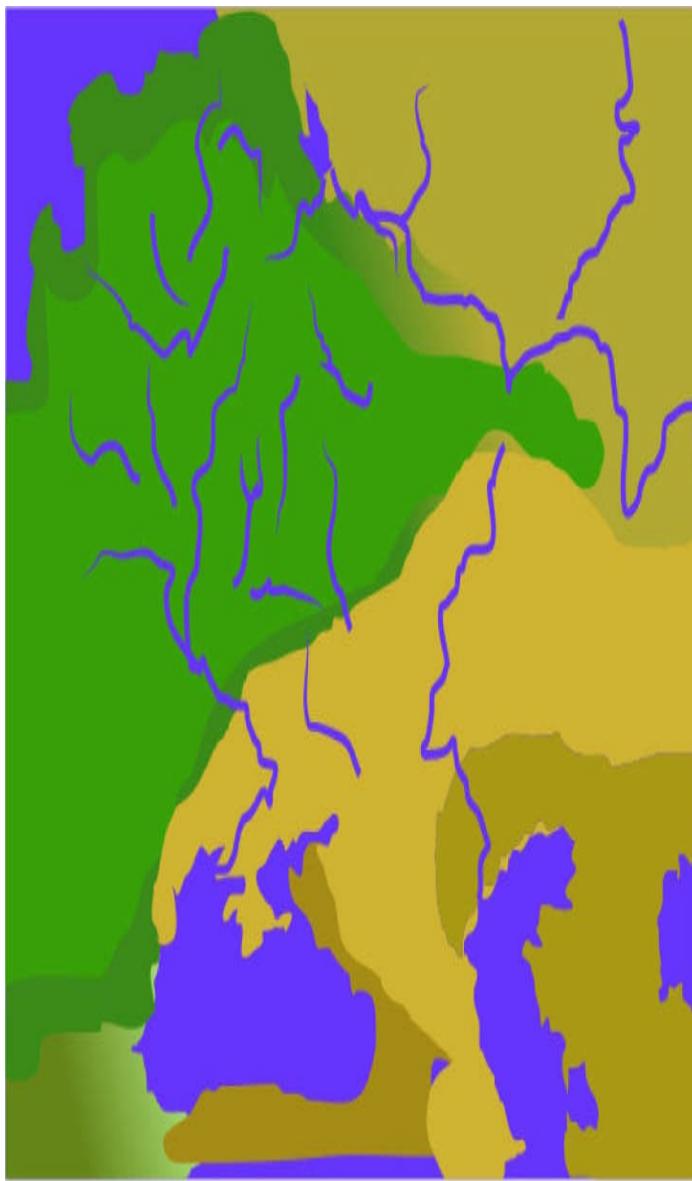
During a Contour effect, dynamically linked shapes are concentrically created outside or inside an object's path. CorelDRAW effectively calculates the shape of each contour step and applies progressive outline and fill colors based on the original object's properties and selected contour options.

While a Contour effect is linked to an object, the object itself becomes a control object, and the new shapes created become the “contour group.” Changes made to the properties of the original immediately affect the linked group. While the contour group is selected, its properties can be edited at any time—without your having to begin the effect from scratch.

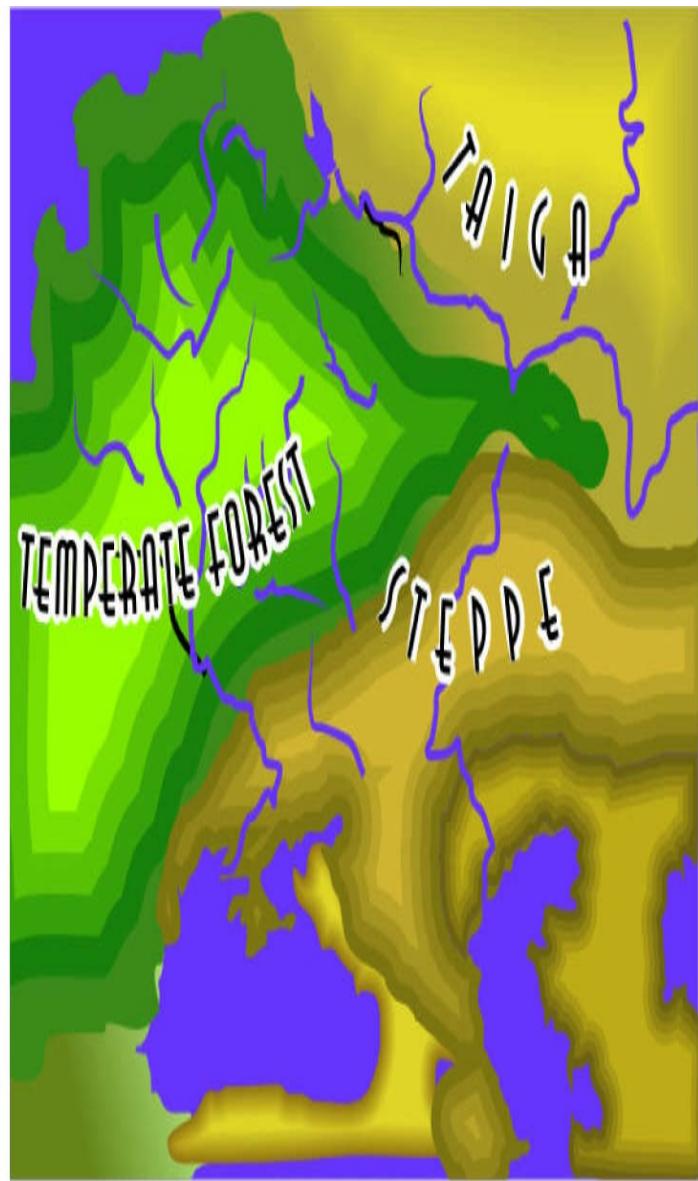
Exploring CorelDRAW’s Contour Effects

First, let's see what Contour effects enable you to do. One of the more popular uses is to simulate depth.

[Figure 14-6](#) shows two illustrations of climate zones in the Urals region of Russia. At left, uniform fills (solid colors) occupy the objects; at right, the same objects have Contour effects. In the contour version, the control objects still use uniform color, but the contour uses different colors for the outermost and innermost objects. This is one of the uses of the Contour effect. As with blends, intermediate objects are generated from the beginning object; however, you don't have to draw the end (the inner object) because it's part of the Contour effect function. Because a high number of steps are used in the Contour effect, you can see a smooth color transition in most of the objects. Also note that some of the objects have a low number of intermediate objects, producing banding, which can be useful in your design work. Just use a low number of steps when drawing a map of the Steppes.



Original filled with solid colors



Finished artwork with Contour effects

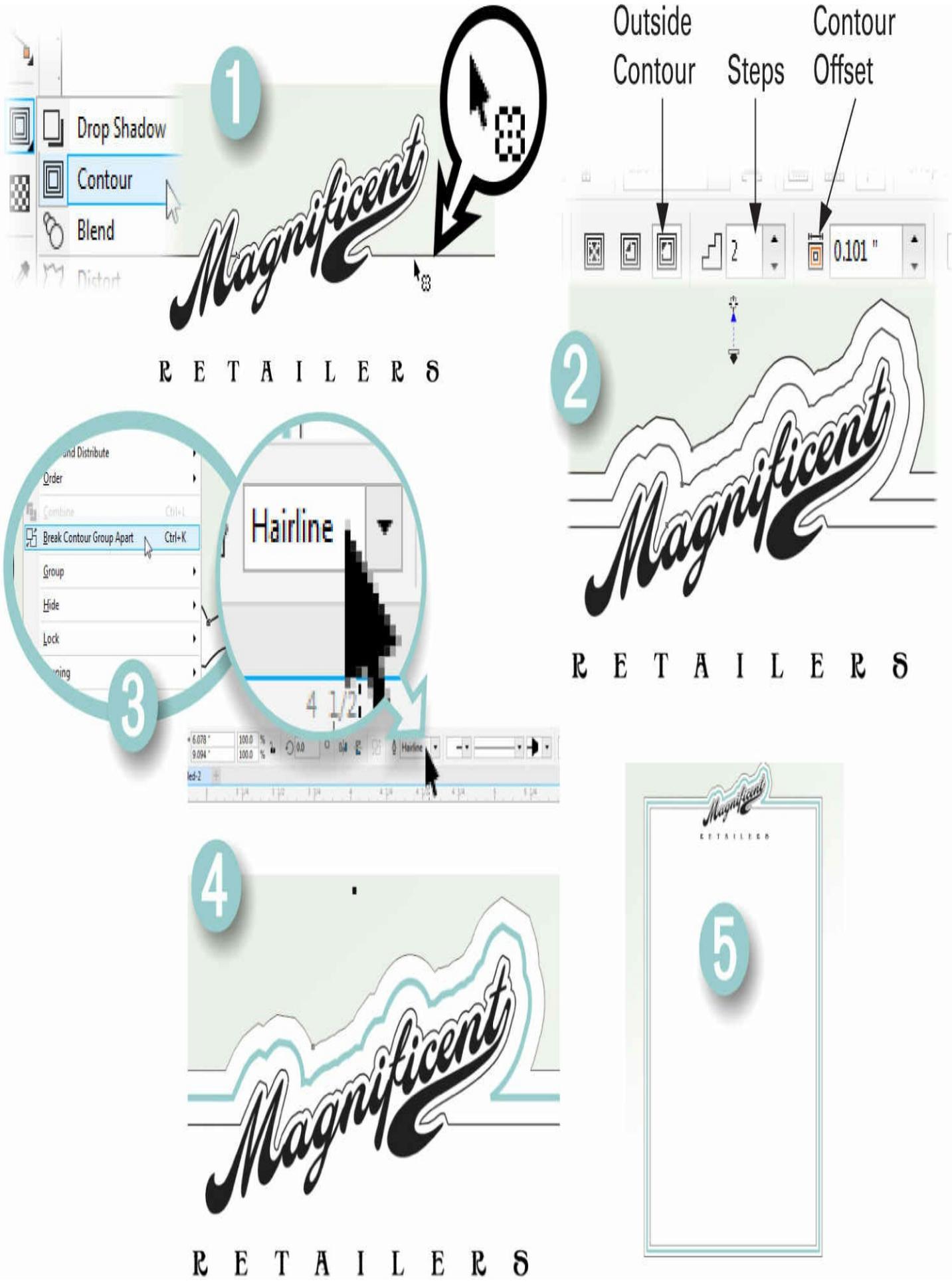
FIGURE 14-6 Contour effects create a smooth color transition.

Here is a fairly simple hands-on example of how the Contour tool can be used as the basis for an Oxford-style (in other words, “fancy”) border around a piece of stationery. Not only will you create a page border, but the border will also curve around the text at the top of the page. The Contour effect was applied to the text before this file was created, the contour was broken at the left and right using the Shape tool, the border was similarly broken at the horizontal middle, the two shapes were broken using the CTRL-K (Break Apart) command, and then the two lines were joined. You’ll work through this stuff in the following tutorial, though. By the way, in your own adventures, you do not have to convert text to curves to apply a Contour effect. All the text in this CDR file was broken into curves.

Creating Expensive Stationery

Tutorial

1. Open Magnificent Stationery.cdr, a base for the stationery you'll create for a company who thinks "Magnificent" is an appropriate or even safe name for a retail company. Choose the Contour tool from the Toolbox, click the Outside Contour button on the Property Bar, and then touch the outer border (as shown in callout 1 in the following illustration) to tell CorelDRAW you're going to make a contour out of the selection.
2. It's possible that the outside contours will have an inside color, which you don't want in this example. If this is the case, go up to the Fill Color box toward the right side of the Property Bar and then choose white.
3. You probably don't want to create this outside border effect manually using the interactive controls shown in callout 2 in the illustration. Why? Because you're applying a relatively small amount of contour, and inevitably when you drag on an interface element, you're prone to apply a quantum error to the effect. Instead, use the controls on the Property Bar. Click the Outside Contour button, set the number of steps to 2, and then type **0.101"** in the Contour Offset box—and then while your cursor is in the number box, press ENTER on your keyboard to apply the effect.
4. Let's not stop at the two-step contour for the finished product. Instead, let's make the contours different colors and widths, very classy like... and stuff. With the contour selected, choose Object | Break Contour Apart, as shown in callout 3 in the magnificent illustration. The former contour pieces are grouped together, so press CTRL-U to ungroup them. Choose the Select tool from the Toolbox and then click a vacant area on the page to deselect everything.
5. Click the outer object; then, on the Property Bar, choose Hairline from the Outline Width box on the Property Bar.
6. Click the middle ex-contour shape. Why not give it an aqua color? Choose 2 points for the outline and then double-click the Outline Pen box at the lower right of the interface. Click the Color drop-down list and then type **#4CD4D4** in the hexadecimal box. Press ENTER to apply the color, and then close out of the Outline Pen box. Apply the same outline (and black as the outline color) to the innermost ex-contour object, just like you did in step 4. In callout 4, you can see a close-up of some very tasty editing you did.
7. Again, if CorelDRAW gets fussy and wants to change the contour object's fills, just return to that fill color button on the right side of the Property Bar and then choose White.
8. Callout 5 in the illustration is an inadequate-sized picture of the final result of your work here. Save the file under a different name, and you just might decide to take this tutorial out for a spin on your own someday. Happy CTRL-P adventures!





Tip Letterhead fonts (just do a search on “LHF”) were used in the previous tutorial to get an exceptionally professional letterhead look. See [Chapter 12](#) for the inside track on professional typography and the use of appropriate fonts in your work.

Using the Contour Tool and Property Bar

To apply Contour effects, you’ll need to use the Contour tool, shown in [Figure 14-7](#), in combination with the Property Bar. You’ll find the tool in the Toolbox with other interactive tools: Blend, Drop Shadow, Envelope, Distort, Extrude, and Transparency.

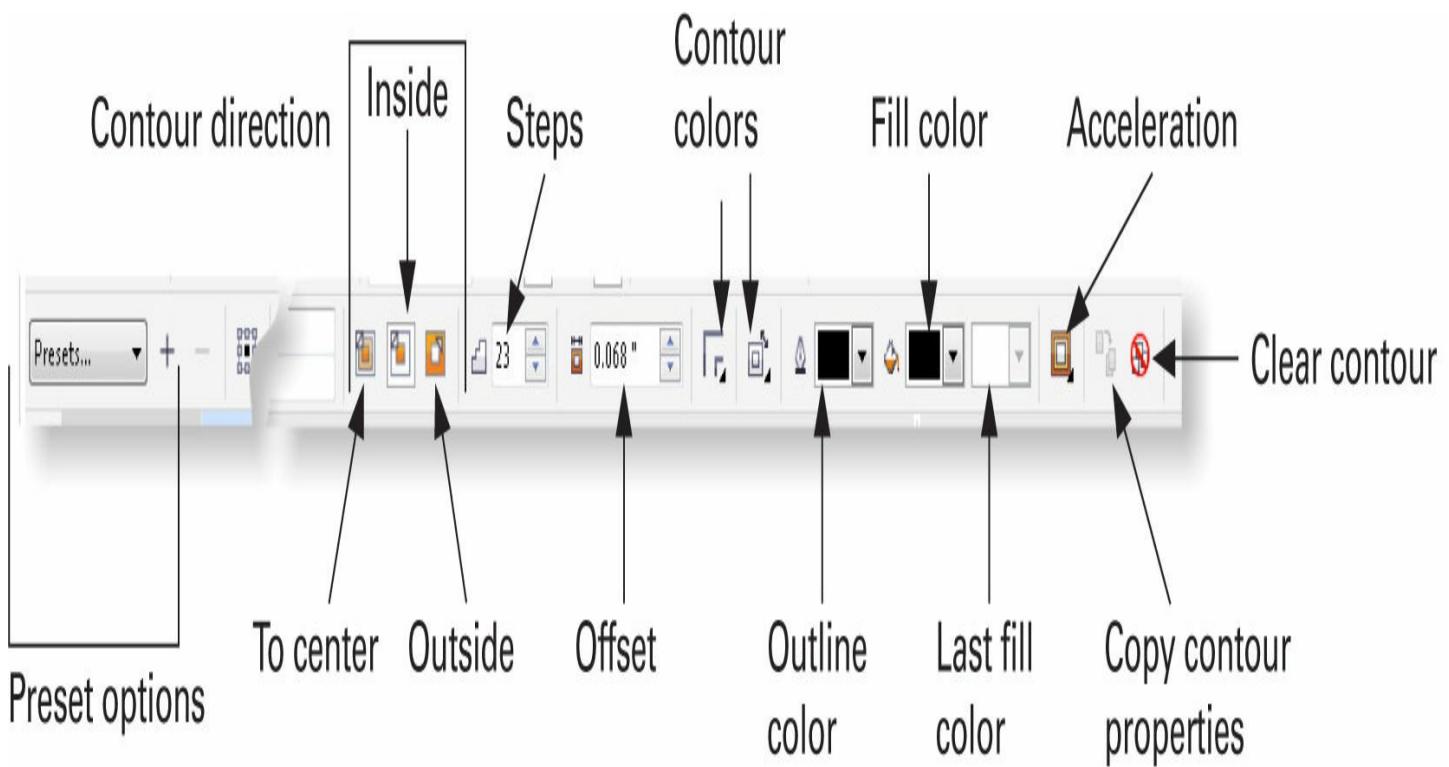


FIGURE 14-7 Use the Property Bar to make the fullest use of the Contour tool.

While you’re using the Contour tool, the Property Bar displays options for customizing the effect. These options include contour presets, contour direction, steps and offset spacing, color rotation, outline and fill color, and buttons for copying and clearing the effect, as shown in the figure.

Let’s put some of the Contour tool’s features to use.

Applying a Contour Effect

Tutorial

1. Create an object (a polygon or star is a great seed shape for contours); apply a fill and (optionally) outline properties. If you'd like to go wild with this Contour tool tutorial, try filling the object with a fountain fill—contours produce interesting results with fountain fills.
2. Choose the Contour tool. Notice that your cursor changes and the Property Bar now displays Contour options.
3. Click the object and drag (click-drag) in the direction you want the contour to be applied. Dragging from the center outward creates *outside* contours; dragging in the opposite direction creates *inside* contours. The angle of the drag action has no effect on the contours themselves—only inward and outward count. Notice that as you drag, a silhouette of the final size of the Contour effect appears in inverted screen colors.
4. Release the mouse button, and your effect is finished and ready for customizing.

These steps created a contour in its default state. Adjusting the effect to suit your needs takes a little more work with the Property Bar options. The contours outside or inside the object can also be controlled using the interactive markers surrounding the effect. The next section explains the use of these markers, their purpose, and how to manipulate them.



Tip To remove a Contour effect, click the contour portion of the effect using either the Contour tool or Pick tool and choose Effects | Clear Contour, or click the Clear Contour button in the Property Bar.

Editing Contours Interactively

The easiest way to edit a Contour effect is by doing it “hands on,” using the Interactive Contour tool to change the interactive markers in combination with adjusting Property Bar options. Use them to adjust the direction, spacing, and offset values of the effect.

The black diamond-shaped marker indicates which object is the control object of the effect. The white rectangle marker indicates the final object in the contour group, and its position sets the distance between the control object and the last object in the effect. A slider between these two enables you to adjust the spacing between the contour steps interactively, which, in turn, sets the number of steps by dividing the difference. [Figure 14-](#)

8 identifies the interactive markers and their purpose.

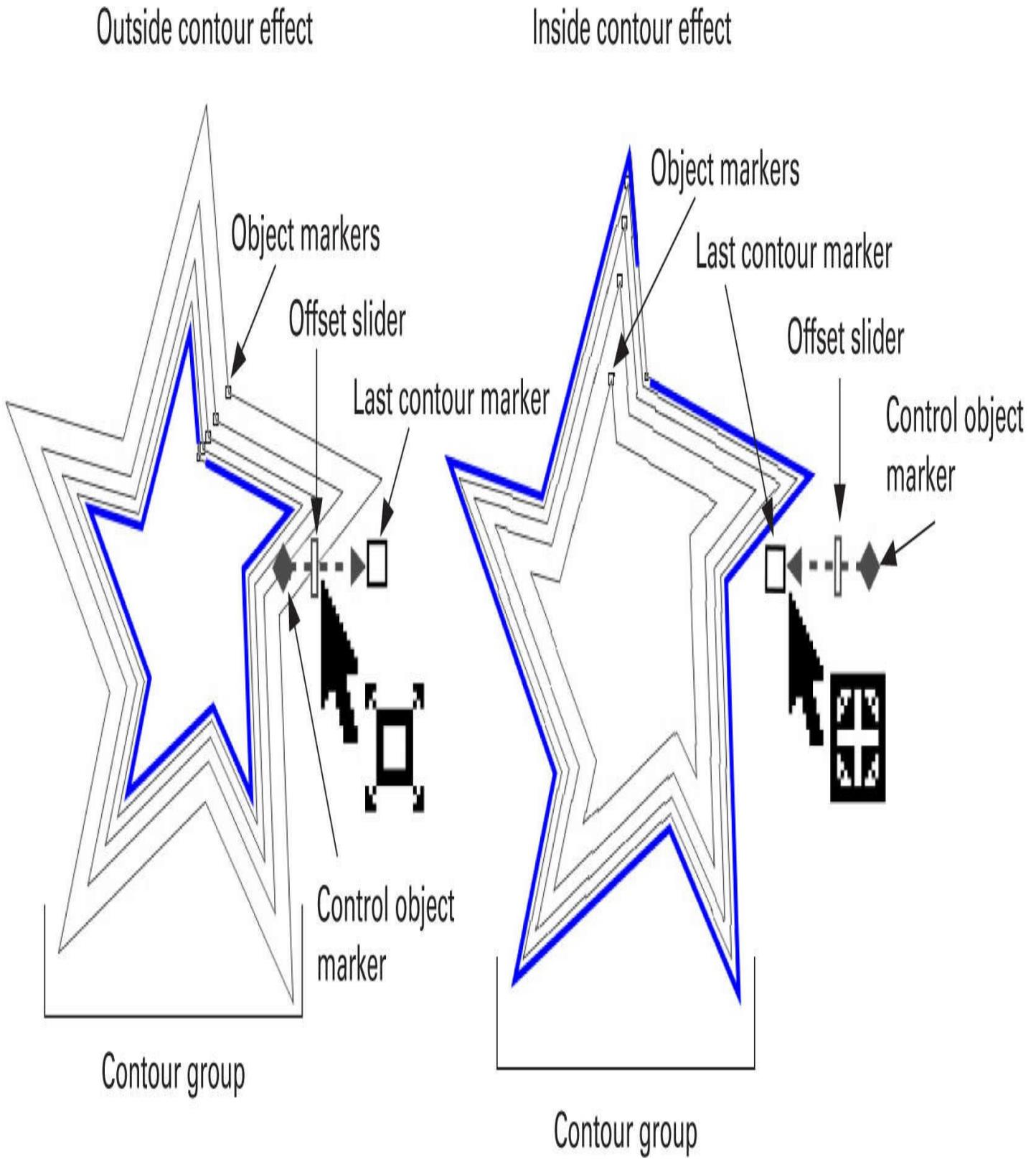


FIGURE 14-8 These two shapes have contours applied in opposite directions.

You'll also notice the Contour tool cursor changes its appearance as you drag outside,

inside, or to the centermost point of your selected object, as shown in [Figure 14-9](#). While held over an object, the cursor will also indicate whether the object is valid for the Contour effect.



Nope. Cursor isn't touching anything, or object just can't be contoured.	Tool cursor is inside the object; the object is ready to be contoured.	Tool cursor indicates an outside contour is being created.	Tool cursor indicates an inside contour is being created.	Tool cursor indicates a center contour is imminent.
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FIGURE 14-9 The Contour tool cursor lets you know what's going on.



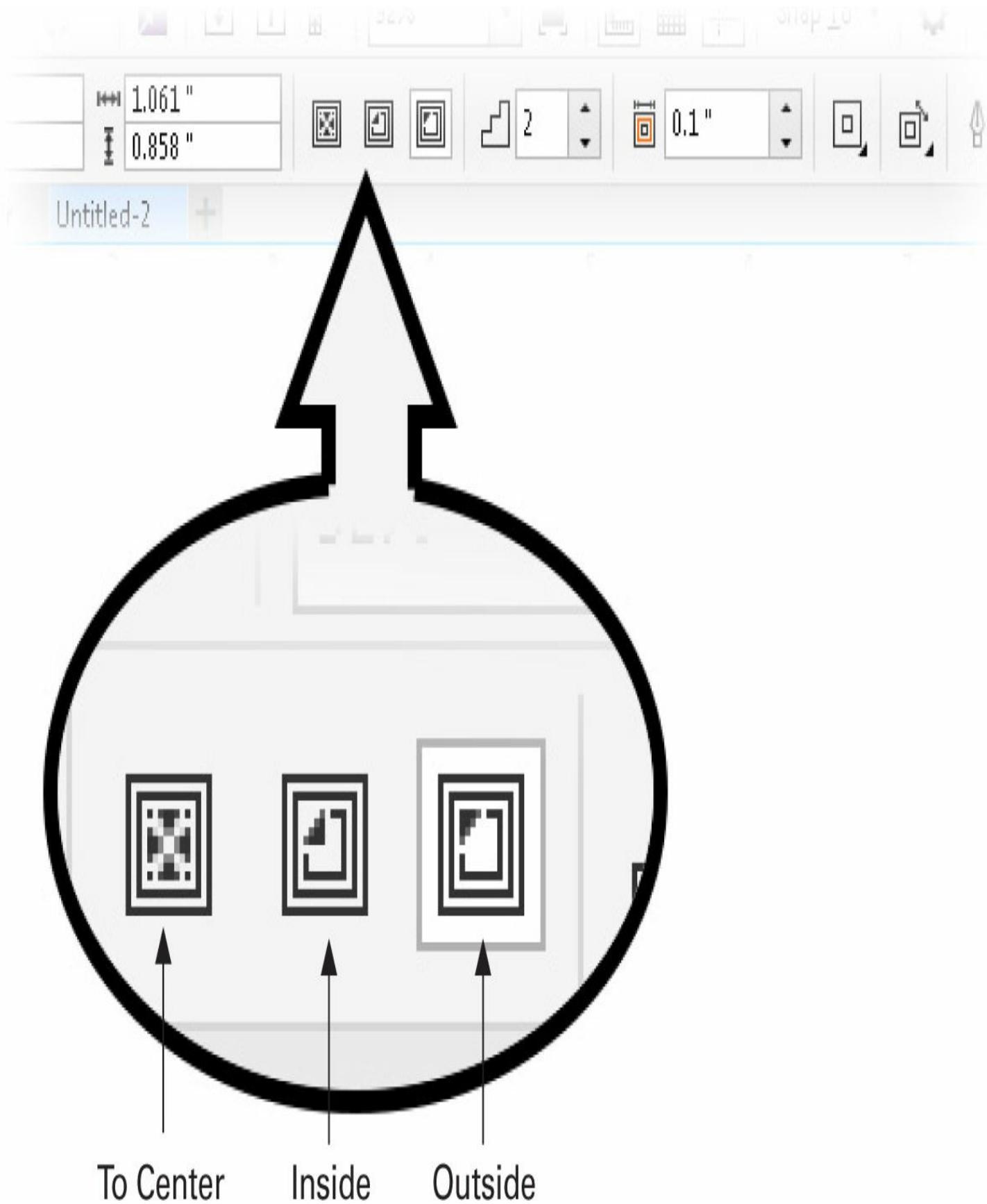
Tip To quickly edit a contour, double-click the effect portion of an existing contour with the Pick tool.

Incidentally, the Contour tool is accommodating to a fault. It can apply a contour to an object that has an envelope applied to it; it will even apply a contour to a group of objects. But note that you may not be happy with the results, which are as predictable as a Three Card Monte game a guy hosts on a street corner on top of a cardboard box.

Choosing Contour Direction

You've already seen how to create an outside contour, but wait—there are two more types! Choosing either To Center, Inside, or Outside, shown next, causes the contours to be applied in the direction relative to the object's outline path. When Inside or Outside is

selected, you can set the number of steps and the offset spacing between the steps by entering values in the Steps and Offset boxes in the Property Bar and then pressing ENTER.



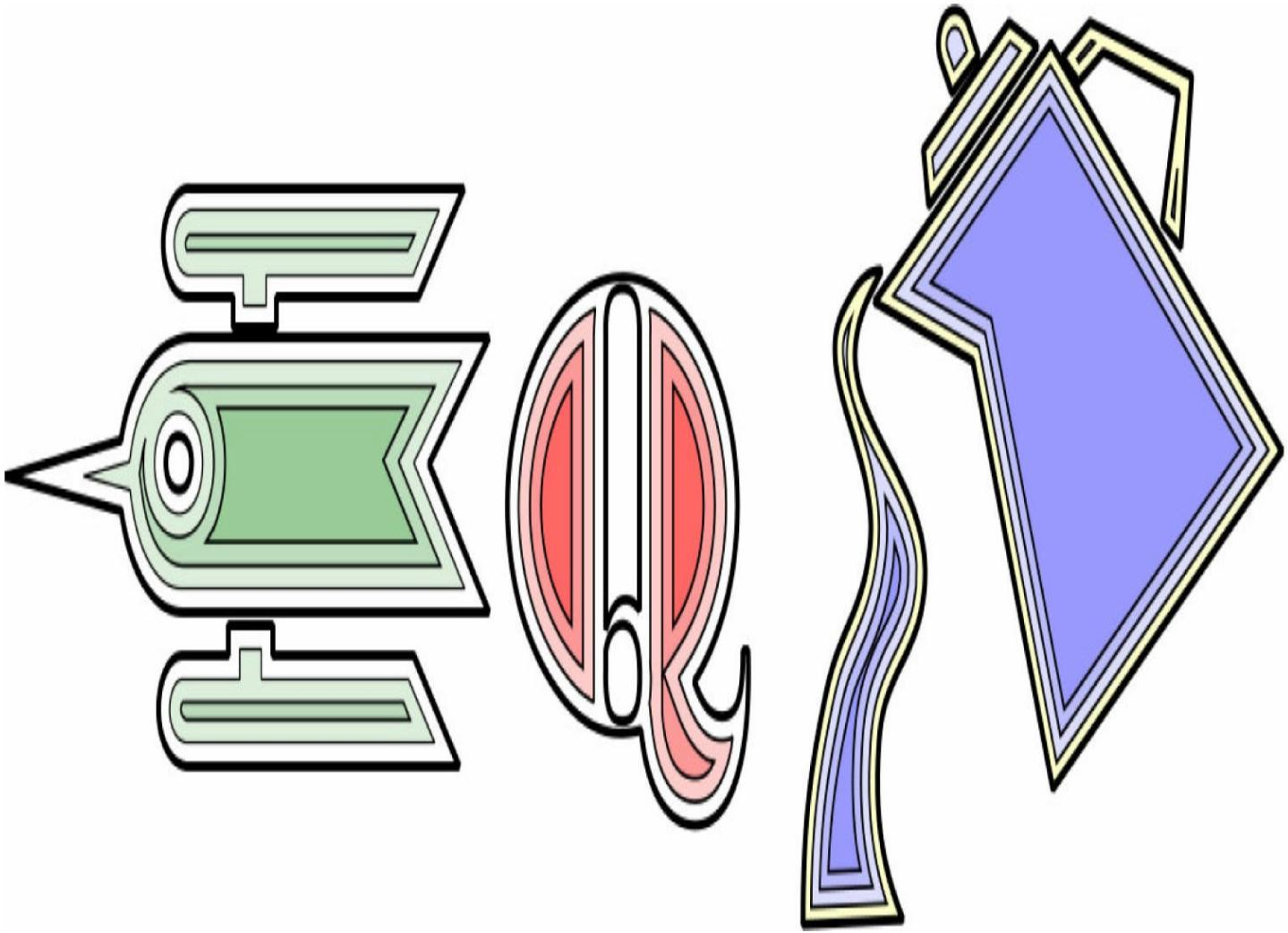


Tip To separate an applied contour and break the dynamic link to the original object, right-click directly on the effect (objects) and then choose Break Contour Group Apart from the pop-up menu.

The effect's contour direction, spacing, and offset values affect one another. In the sections that follow, remember that when you change one parameter's values, a different parameter will probably auto-change.

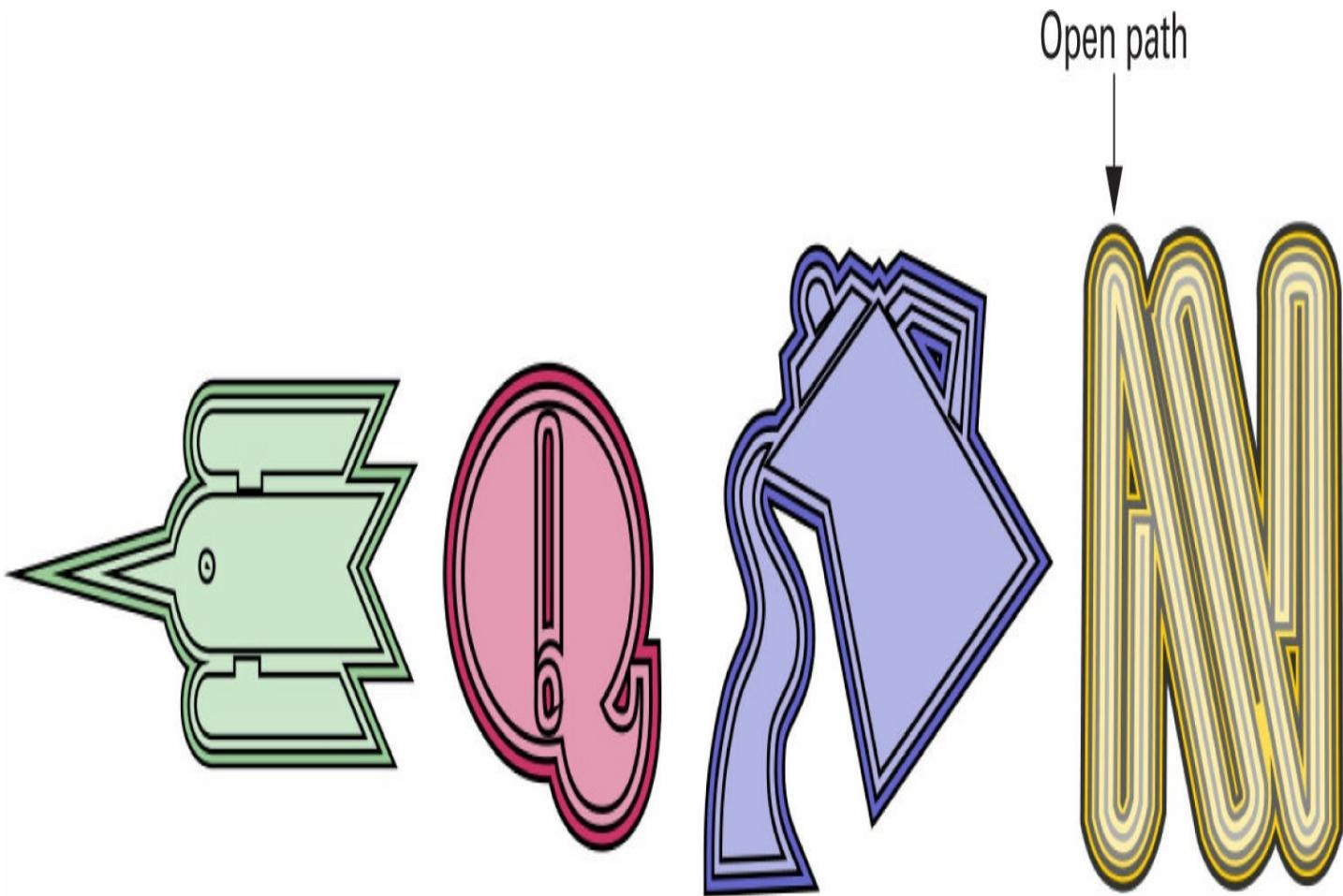
Contour Inside

With the exception of the 47 clowns that can get out of a Volkswagen, there is a real-world and mathematical limit to how many steps you can use to create a shape within a shape. For contours, if the offset spacing value you enter in the Offset box (on the Property Bar) exceeds the number of steps the distance allows, the Steps value is automatically reduced to fit. Here, you can see some results of applying inside contours to different objects; as you can see, compound paths produce quite elegant contour steps. Remember: open paths are not eligible for Inside Contour effects; it can't be done mathematically, and it can't be done in CorelDRAW.



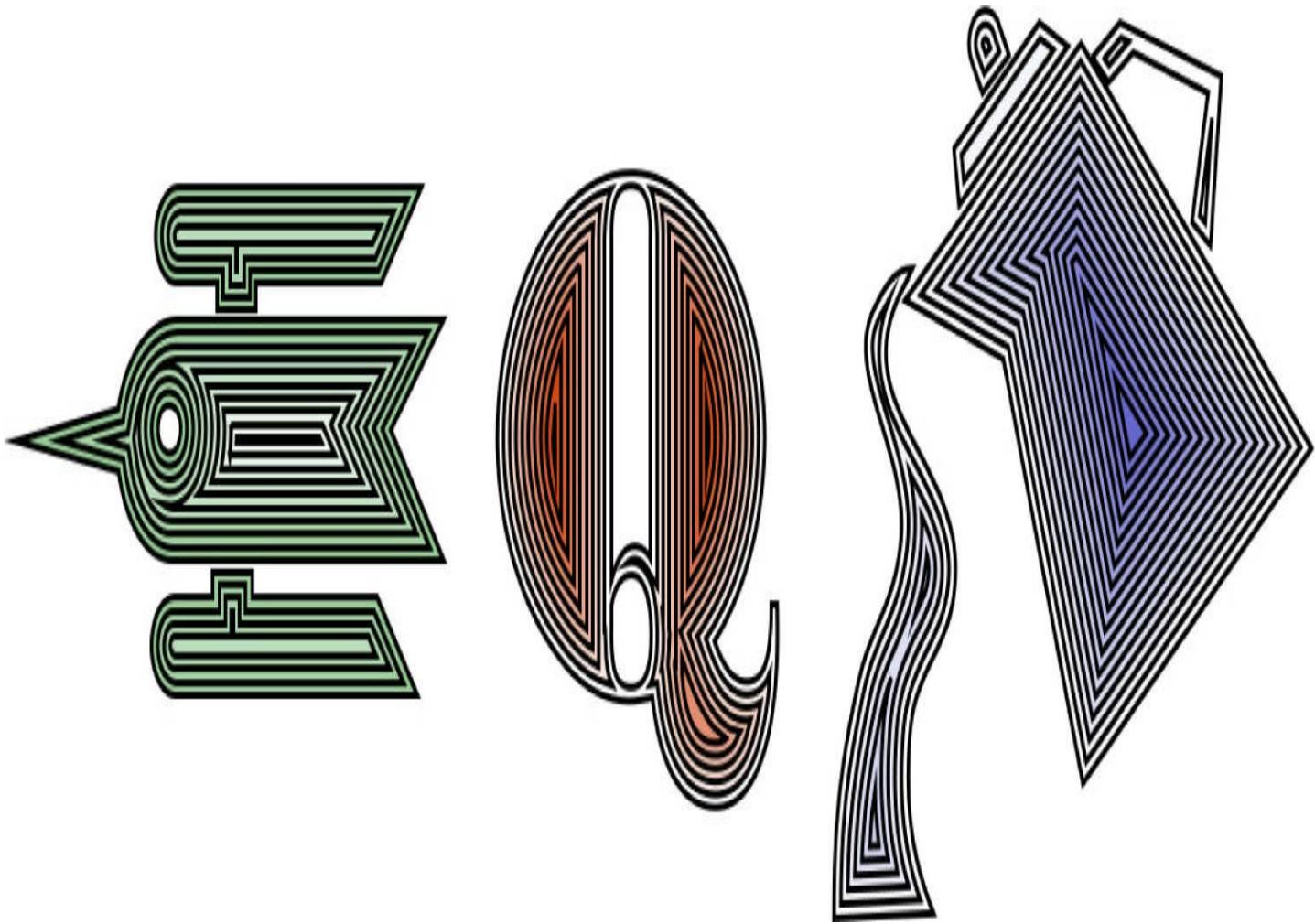
Contour Outside

Choosing the Outside option creates contours *around* your object—and yes, you can use an open path, as shown in this illustration with outside contouring. It creates an interesting effect you can use for designing everything from neon signs to expensive paperclips. The Steps value can be set as high as 999, and the Offset values travel within a range of 0.001 to 300 inches.



Contour To Center

The To Center direction creates the contour inside the selected object, but it does so using as many steps as mathematically possible. The number of steps depends on the Offset value (editing the number of steps is not available). In any case, your object is filled with a contour. This is a terrific option for illustrating game mazes—with a little editing after making a contour of a bicycle or a flower in a pot, you could fill a book with games like you see on children's menus in restaurants. Here, the Offset value is the only parameter that can be changed; the number of steps is calculated automatically. This illustration shows contours applied using the To Center option; as with the Inside option, open paths cannot take a To Center contour.

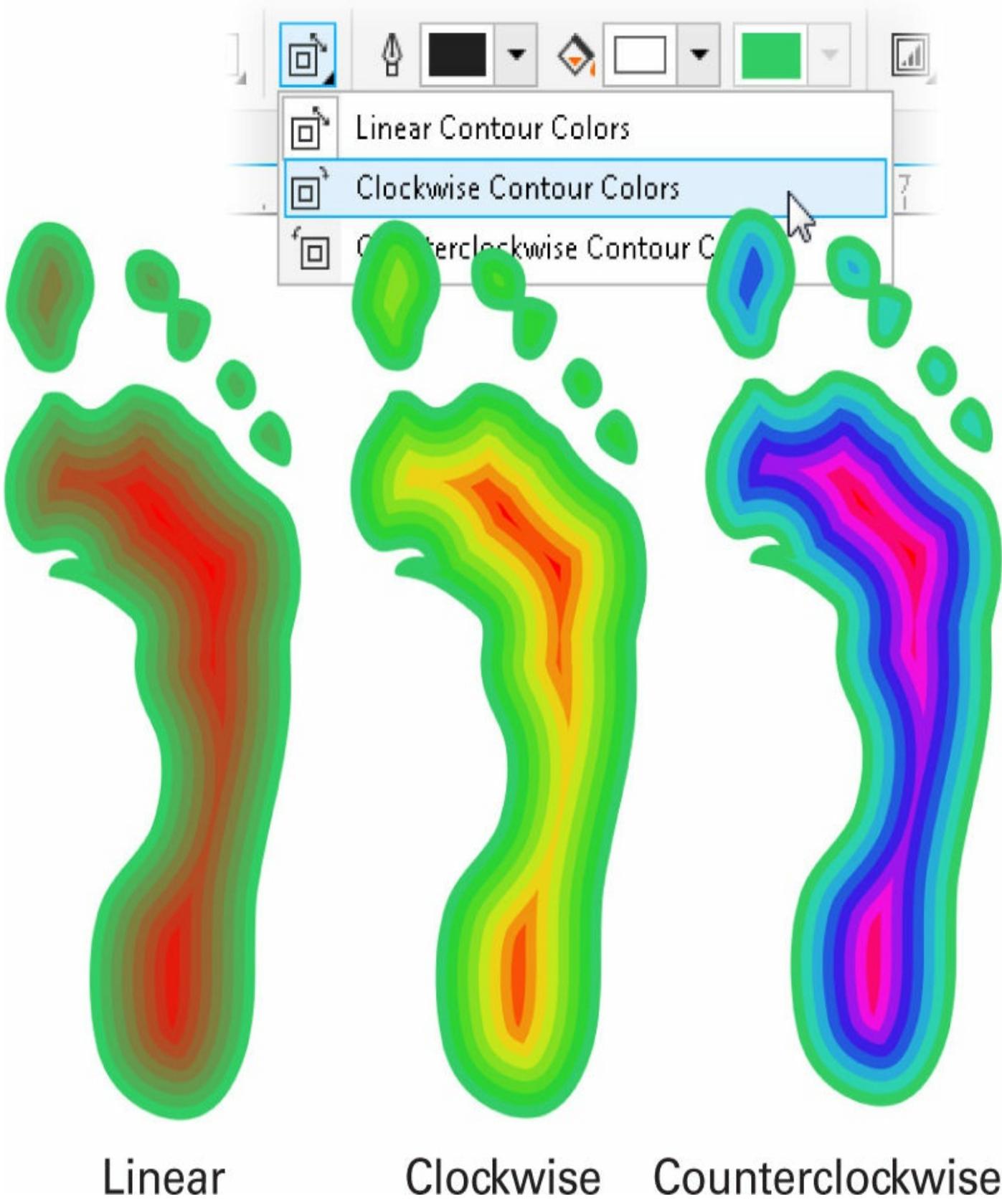


Setting Contour Colors

Controlling the progression of color between your original object and the colors of the Contour effect is important in creating great illustrations; CorelDRAW is a wonderful drawing program, but *you* are the artist! You can set color in several different ways, specify a *nonlinear color rotation*, control the pen and fill colors, and even set fountain fill colors for individual contour steps.

Color Rotation Options

A default contour creates fill and outline colors in a steady progression between the base object and the final contour (the End object if contours were blends). However, you can rotate these colors to create rainbow contours and other special effects. To do this, choose either Clockwise Contour Colors or Counterclockwise Contour Colors, as shown here, which has the effect of applying fill and outline colors based on color positions located around a color wheel—red, orange, yellow... you get the idea!



Outline Color

The Outline Color option—the pop-up mini palette directly to the right of the color rotation options on the Property Bar—sets the outline color of the last contour in the effect, meaning

the colors change steadily from your original to the last contour object. To set the outline color, click the Outline Color selector and choose a color. If your object doesn't have an outline color applied, this option still displays black as the default color, but no color will be applied to your contours.

Fill Color

If you want to wow your audience, definitely play with Fill Color to create significant changes along the steps of a contour. It's the mini-palette directly to the right of Outline Color on the Property Bar. To set the fill color, click the Fill Color selector and choose a color. If an object doesn't have a fill, although you can set a contour color, the contour will not have a fill. This creates an interesting effect if you have outline width and colors applied to the base object, but with no fill and no outline set for the base object to which you want to apply a contour—it's an exercise in artistic futility.

Creating Special Effects With Contours

Because Contour effect intermediate steps travel concentrically from the control object to the end of the effect, you can accomplish certain things that would take hours or perhaps not be possible using other tools and effects. For example, a Blend effect is simply the wrong choice of tool when you want interior shading in an object, because when you scale an irregularly shaped object (such as the letter *Q*), it scales disproportionately. As a result, when you blend, say, a *Q* to a smaller *Q* you've centered inside the larger *Q*, the intermediate blend objects scale different areas disproportionately. Therefore, a key to creating smoothly shaded objects is to use a Contour effect with many steps and a small Offset value. Here's a sample recipe: With the Artistic Text tool, type the letter **Q** (uppercase), choose a bold font such as Futura, use black as the fill color, and make it about 200 points in height. With the Interactive Contour tool, choose Inside on the Property Bar, set the Offset to about 0.001", create about 150 steps, and choose white as the fill color. The result is a very smoothly shaded piece of artwork that will print beautifully with no banding, because 150 intermediate steps from black to white within relatively small objects is just about the upper limit for laser printers and most inkjet printers.

However, a smooth contour transition might not always be your artistic goal; by using no fill but only an outline width on objects, a small number of steps, and a relatively high Offset value, you can indeed design topographic maps, magnetic fields, and other illustrations in the technical vein. In [Figure 14-10](#), you can see an object with the top edge suggesting a landscape—created by using the Roughen Brush. The Contour objects are white lines, they have a high Offset value so they're clearly visible, and then the Effects | Add Perspective command was used to suggest Contour effects that have depth in the illustration. The text also has a Contour effect; a linear transparency was then added from top to bottom.

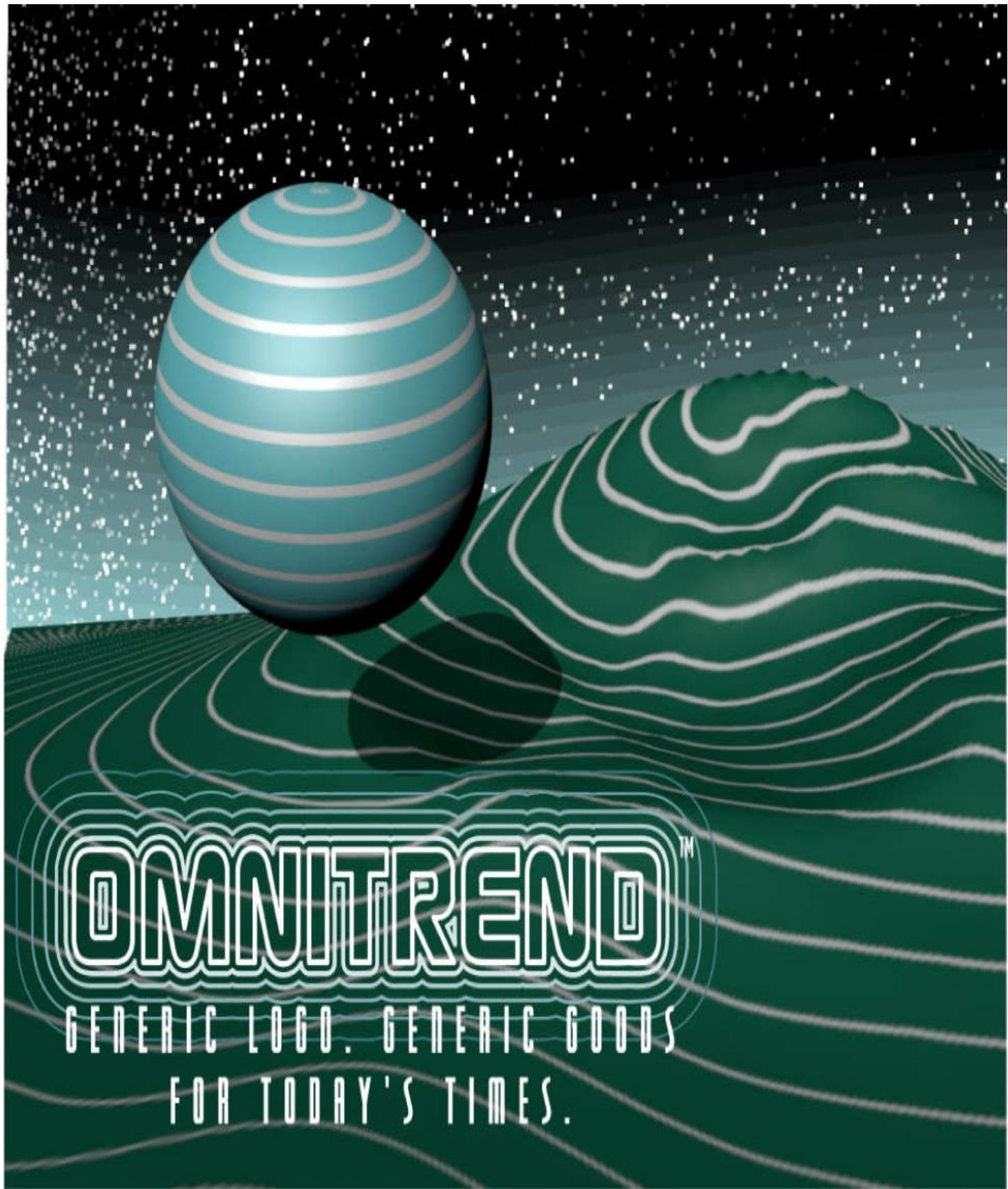


FIGURE 14-10 Make smoothly shaded Contour effects or make the effect obvious; the technique you choose depends on the illustration assignment.

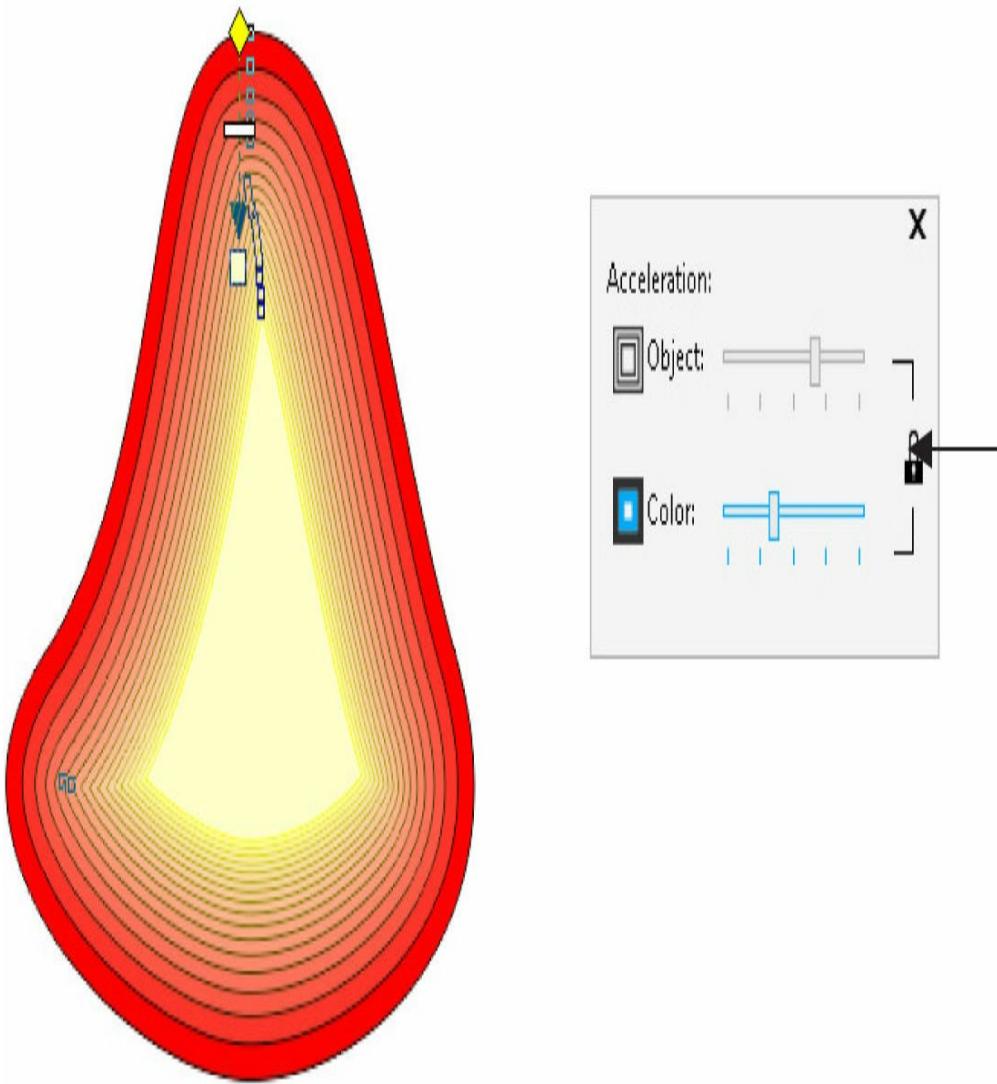
Fountain Fill Color

Contour effects also support the use of certain fountain fills in linear, radial, conical, and square modes. The Last Color Fill selector on the Property Bar can be used to change the last color in the contour of the original object, which can produce some very artsy effects.

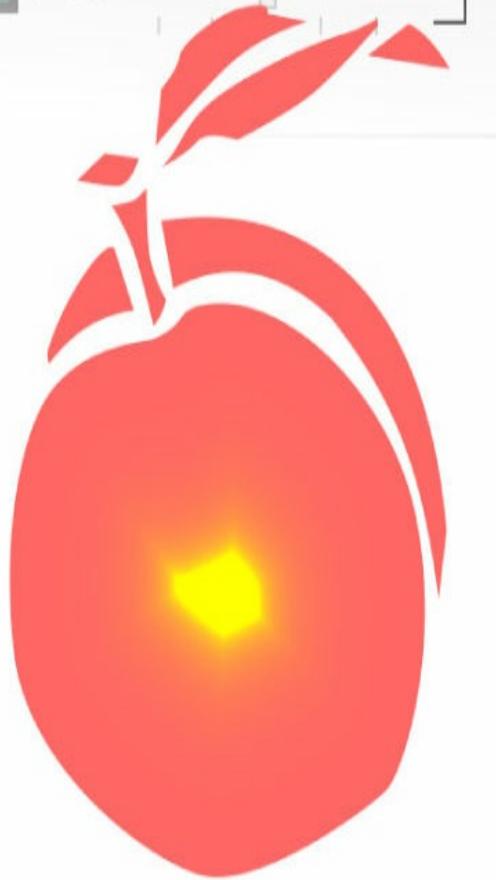
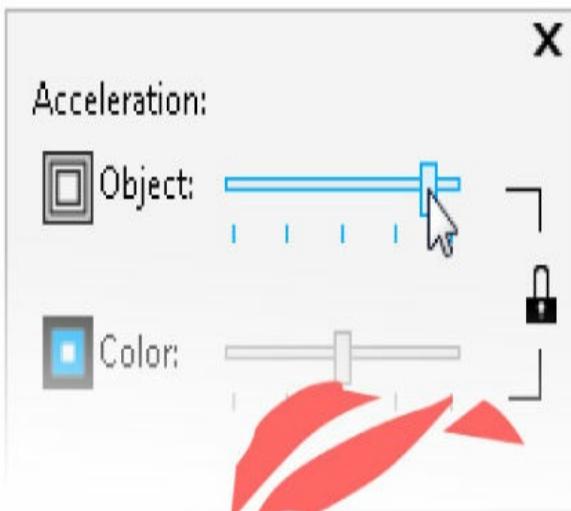
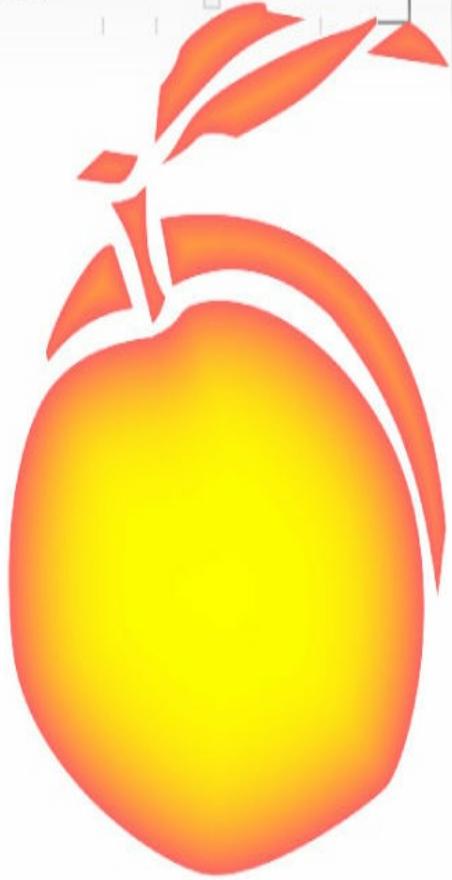
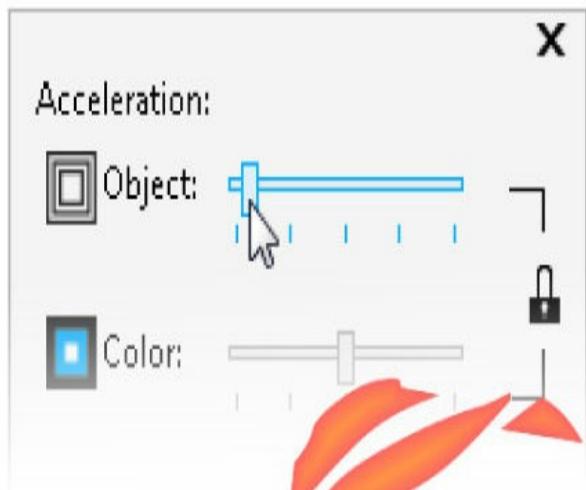
If you've applied a fountain fill to your original object, the color fill properties of the contour group are also applied with the same fill type. If you've contoured an object that has a fountain fill, use the Property Bar to set the last color in the Contour fountain fill; if the fountain fill uses multiple colors, the Contour fountain fill ignores the transition colors. If an object doesn't include a fountain fill, the Last Color Fill selector on the Property Bar is unavailable.

Controlling Contour Acceleration

Just like blends, contour acceleration options have the effect of either increasing or decreasing the rate at which the contour group objects change shape (and color) as they progress between the control object and the final object. You can choose Object Acceleration and Color Acceleration options on the Property Bar when a Counter effect object is selected in the drawing window. When a default contour is applied, both these settings are at a default midpoint—the contour objects change in color and size evenly. Change both acceleration rates simultaneously (the default) while the two options are linked, or change them individually by clicking the Unlink Acceleration option, shown next.



To access acceleration options, click the Object and Color Acceleration button in the Property Bar and then adjust the slider controls and/or choose the Unlink option. Moving the sliders to the left of the center position reduces (or slows) the acceleration rate between the control object and the final contour in the effect. Moving the sliders to the right increases the acceleration. While the two acceleration options are unlinked, changing the object acceleration affects only the progression of shapes in the contour group. [Figure 14-11](#) shows the effects of increasing and decreasing acceleration.



Object Acceleration decreased;
slider moved left of center.

Object Acceleration increased;
slider moved right of center.

FIGURE 14-11 Acceleration rates can dramatically change the look of an object that has a Contour effect.

When the sliders are unlinked, changing the Color Acceleration slider affects only the change in progression of the fill and outline colors between the control object and the final contour in the effect, leaving the object shape acceleration unchanged. Moving the sliders (or interactive markers) left or right decreases or increases acceleration, respectively, between the control object and the final contour.



Tip Changing the Color Acceleration slider also affects the color properties applied to outline paths of objects.

Using the Contour Docker

Although the Contour tool is the most intuitive way of applying contours, you can still apply them using the old Contour docker as an alternative. The Contour docker has been redesigned in DRAW X8 to offer you *all*, not just some, of the Property Bar options.

To open the Contour docker, choose Effects | Contour or choose Window | Dockers | Effects | Contour (CTRL-F9). The docker's options are organized a little differently than on the Property Bar, but the same options can be found there. One advantage to using the docker is that, as with the Blend docker, you can choose all your options before applying them.

In this chapter, you've seen where to find the options for controlling and customizing blends and contours, so you know where things are. However, just like with operating heavy machinery, don't take prescription medicines an hour before beginning. And when you turn the key, the real fun begins! Dig into Blend and Contour effects; add shading to simple objects to make creating workaday illustrations an inspiring endeavor and to reap the reward of the automation that's possible within CorelDRAW. Blends and contours are some of the best ways to generate scores of similarly shaped objects, so fill your page with little drawings to make patterns, charts... you name it.

[Chapter 15](#) takes a severe right turn, as we head into color models—those funny initials CMYK, HSL, and so on that you see when you begin to define a color in one of the Window | Color Palettes and the Color Management settings for your document under the Tools menu. After all you've learned so far—and all you intend to create in the future—it's sort of a given that you want the colors you print to be similar to those you see in CorelDRAW's workspace. And you don't want your web graphics to look as though they were taken from the Sunday funny papers. Color management is your next stop in [Chapter 15](#), and it's your insurance that what you create is what you get (WYSIWYG, or something like that).

15 Mixing and Matching with Digital Color Models

Put away those crayons and fling that color wheel out on the front lawn. *Digital* color obeys *none* of the rules we were taught in school, and you use digital color models to fill objects that CorelDRAW, in turn, displays on your monitor. Defining colors, *period*, is an art that even professionals occasionally struggle with. The good news is that CorelDRAW makes applying the color you have in mind as simple as can be, through an extensive collection of industry-standard swatches, intuitive color models, and color mixers that make color definition more like play than work.

If you've ever been faced with picking out a tie to match your shirt at 6:30 A.M. in a dimly lit closet, you'll appreciate the importance of choosing harmonious and intriguing color schemes. Similarly, your color work from DRAW is out there for the public to evaluate; this chapter guides you through the digital process of choosing colors and ensuring that what you print is what you see onscreen. You want your colors to be *consistent* from the screen to the saved file to the final output.

Digital Color Terms and Definitions

Let's say you've created a rectangle on your page; by default, it has no fill. There are two quick ways to fill it. You can left-click on a color on the color palette, which offers a nice selection of preset colors. But let's say you want a specific color. If so, you double-click the Fill icon on the Status Bar (either the swatch or the bucket icon), shown in the following illustration, and you can then see (and work in) the Uniform Fill dialog as long as the selected object has no fill. If it's already filled with a fill *other* than Uniform, click the Uniform Fill style button at the top of the Edit Fill dialog. You're presented with a combination of interface palettes with tabs for models, mixers, and palettes.