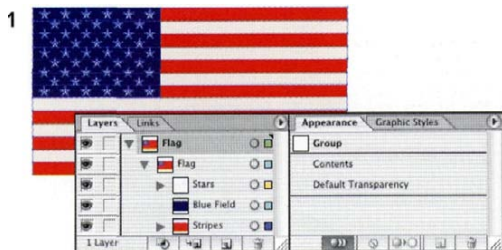


# Warp & Envelopes

Using Warping and Enveloping Effects



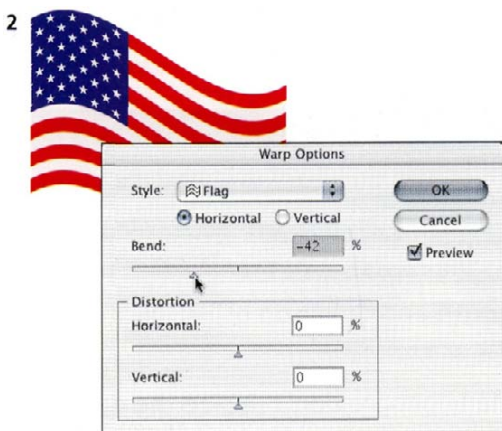
**Overview:** Group clip art for use with Warp; apply Warp; save Warp effect as a graphic style; apply Envelope using a shaped path; add a shading effect using a mesh.



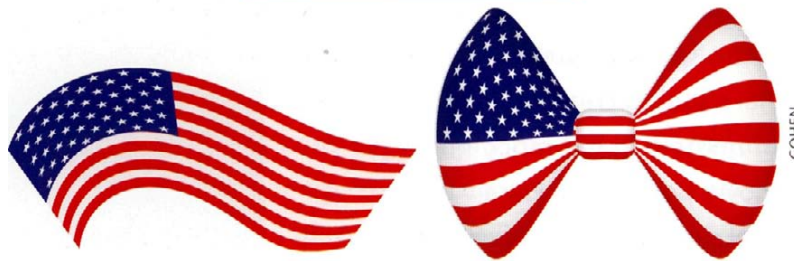
Making sure that the flag artwork is grouped. **Note:** The Appearance palette shows information for the currently targeted (not just selected or highlighted) object in the Layers palette



The Flag Warp applied to a not-fully-grouped flag artwork. The stripes are grouped, but the stars and the union (blue field) are separate objects



With Preview enabled, experiment with the Warp Options settings



After the tragic events of September 11, 2001, consultant Sandee Cohen wanted to make some flag decorations for her Web site. She used Illustrator's Warping and Enveloping effects to mold copies of a basic rectangular flag into a waving flag and a bow tie.

Warp is the easier of the two methods to understand and use. Simply choose one of the 15 preset shapes from the Warp menu and adjust the shape using the sliders in the Warp Options dialog box.

Envelopes let you use any path, warp preset, or mesh object to shape and mold your artwork into almost any form imaginable. You can further manipulate the shape using the envelope's anchor points.

Although Warps and Envelopes leave original artwork unchanged, only Warps can be saved as graphic styles.

**1 Group clip art for use with Warp effects.** Cohen started with a standard United States flag from a clip art collection. First, she made sure that the flag artwork was a grouped object by selecting the flag artwork (which also targets it in the Layers palette) and checking its description in the Appearance palette. If the artwork is not a grouped object, then the effects will not be applied to the artwork as a whole, but rather to each of the paths individually (as shown in the sidebar).

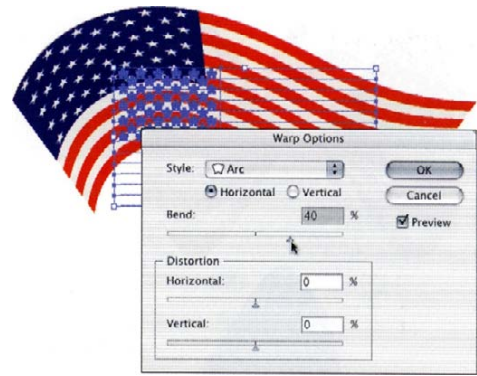
**2 Make a copy of the flag artwork and apply a Warp effect.** Next, Cohen made a duplicate copy of the flag by

selecting it and, holding down Option/Alt, dragging it to a position below the original. While the duplicate was still selected, Cohen chose Effect > Warp > Flag to bring up the Warp dialog. She enabled the Preview checkbox in the Warp dialog box so she could preview the effect her settings would have on the artwork. Cohen set the Horizontal Bend slider to -42% to create the first stage of her waving flag effect, and clicked OK to apply the Warp. She then applied a second Warp effect to the flag artwork, to complete her waving flag. With the artwork still selected, she chose Effect > Warp > Arc and, with Preview enabled, set the Horizontal Bend slider to 40%.

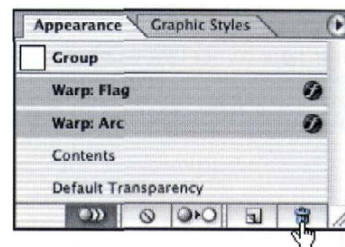
**Note:** In the Warp dialog box, you have access to the full library of Warp shapes no matter which warp you chose from the Effect > Warp menu. Simply click and drag on the style pop-up menu in the Warp dialog box to access any of the Warp shapes. As long as Preview is enabled, you can then experiment with each Warp shape and settings to see how each will affect your artwork before you apply one.

To remove a Warp effect, target your artwork. Then, in the Appearance palette, select the Warp and either click on, or drag your selection to, the Trash button.

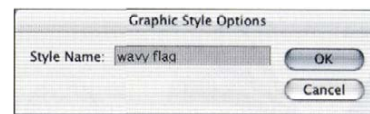
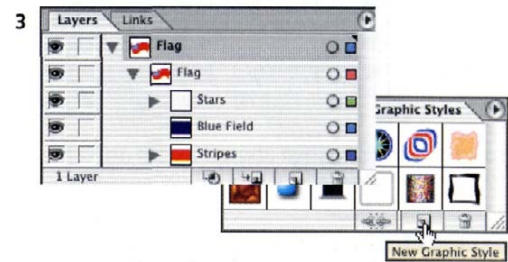
**3 Save your Warp effect as a graphic style.** Once you are pleased with a particular Warp effect or effects that you have achieved, you can easily save the effects as a graphic style for application to other artwork. Begin by targeting the artwork that you applied your warp(s) and other effects to in the Layers palette. Then Option-click/Alt-click on the New Graphic Style button at the bottom of the Graphic Styles palette to create and name your new graphic style. If the appearance you save as a graphic style has no fill or strokes, the thumbnail for the graphic style you created will be blank. When this happens, choose either the Small or the Large List View (from the Graphic Styles palette pop-up menu) to view the graphic styles by name. To apply a graphic style, simply target the object, group, or layer, and then click on the graphic style in the Graphic Styles palette.



Applying a second Warp effect. Because Warps are live effects, the original flag artwork (seen here as an outline in light blue because the artwork is still selected) remains unchanged



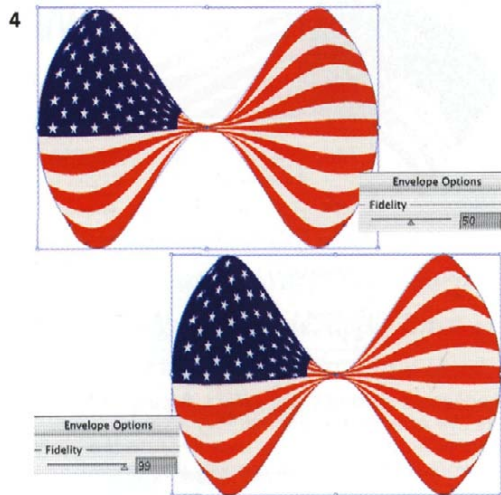
Removing Warp effects from the artwork by highlighting the effects in the Appearance palette, and then clicking on the Trash button to delete them



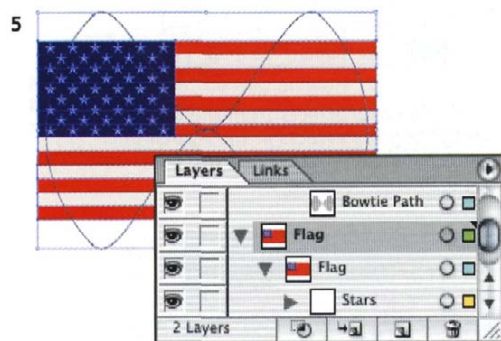
To create a new graphic style, target your artwork, then Option-click/Alt-click the New Graphic Style button, and give your new graphic style a name



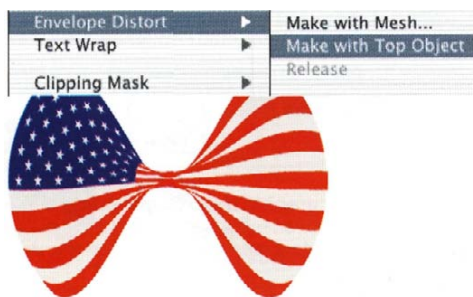
Applying a Warp effect graphic style to a grouped object



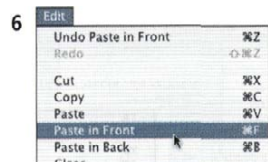
With Envelope Options fidelity set too low, red color in the lower right corner of the upper figure spills outside the bow tie shape. When the fidelity is set to 99% the artwork conforms much more closely to the envelope shape.



Bow tie path positioned above the flag artwork, and selected, just before making the envelope



Applying the envelope, and the resulting artwork



Using Edit > Paste in Front to create a duplicate positioned directly over the original artwork

#### 4 Use Envelope Options to maximize Envelope fidelity.

Envelopes are more versatile in the ways you can shape and manipulate them, but sometimes (especially when the shape you use to create the envelope is kinked or makes sharp changes in direction) the artwork may not conform tightly to the envelope. To minimize this problem, set the Object >Envelope Distort >Envelope Options Fidelity to 99%. Note: Setting Fidelity to 100% creates many more intermediate points along the deformed path, and is usually not necessary.

Cohen used an Envelope to give her flag the shape of a bow tie, and added some shading using a mesh.

#### 5 Apply Envelope using a shaped Path. Cohen added

points to a circle and then distorted it into a bow-tie-shaped path. To apply a shaped path of your own, place it above your flag artwork, select both the flag and your shaped path, and choose Object >Envelope Distort >Make with Top Object.

#### 6 Add a shading effect with a mesh. Next, Cohen added

a shading effect by using a mesh object on top of her bow tie flag. Begin by creating a duplicate of the bow tie flag (Edit > Copy), then paste it in front of the first one using Edit > Paste in Front to exactly align it over the original. With the duplicate still selected, choose Object >Envelope Distort >Reset with Mesh. In the Reset Envelope Mesh dialog box, make sure that Maintain Envelope Shape and Preview are both enabled. Increase the number of Rows and Columns until you are satisfied with the mesh grid in terms of how you intend to shade it. For her mesh, Cohen used 6 rows and 6 columns. Click OK, and with the mesh artwork still selected, choose Envelope >Distort >Release to free the mesh from the flag. Delete the flag artwork and keep the mesh object. When a mesh object is released from an envelope, it is filled with 20% black. Select the mesh object, then with the Direct-select or Lasso tool, select points on the mesh grid and change their fill to a shadow color. Cohen selected interior grid points and

gave them a value of white until she was satisfied with the mesh's shading.

**Note:** *Multiple contiguous points and large areas in the mesh are most easily selected using the Lasso tool.*

To see the effect of the shading on the original bow tie flag beneath the mesh, Cohen (with the mesh selected) set the Blending Mode in the Transparency palette to Multiply. This applied the Blending mode only to the selected mesh object, and not the whole layer.

Finally, using the same enveloping and mesh techniques described above, Cohen created a center for the bow tie using a copy of some of the stripes and an elongated rounded rectangle path.



In this illustration, Cohen applied a U.S.



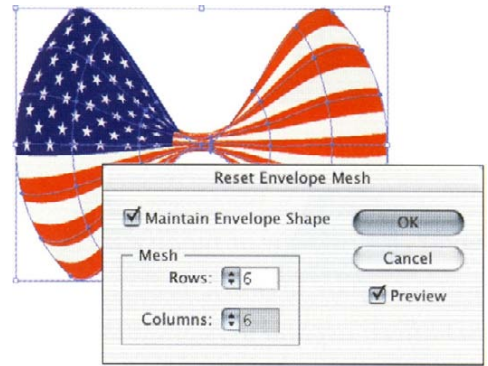
shaped path as an envelope to a US flag.



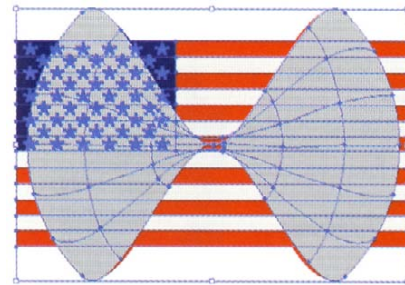
Cohen was not satisfied with the way the flag was enveloped by default, so she used the Mesh tool to add mesh points to the envelope. She then moved the new mesh points manually to adjust the flag artwork within the envelope outline.



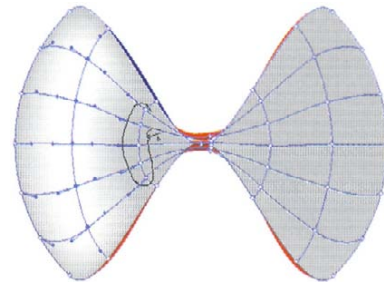
3D look, Cohen added a shaded mesh over the country-shaped flag using the same techniques that she used to shade the bow tie-shaped flag in the lesson.



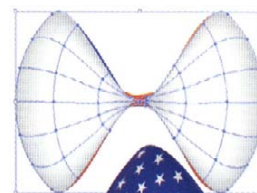
Creating a mesh object using a duplicate of the bow tie flag envelope artwork



Using Envelope > Distort > Release to free the mesh from the flag artwork



Using the Lasso to select multiple mesh points



Before and after applying a blending mode of Multiply to the shaded mesh object