

Polar City

By Ben Willmore

What You Will Need:

- Photoshop 5.0
- Image: "newyork.jpg" from the PEI Web site (www.peimag.com)

In this tutorial, Ben Willmore shows you how to transform a city skyline into a planetscape of its own. In following these steps, you'll pick up a thing or two about Photoshop tools and filters.

The inspiration for this technique comes from my brother in New York. He thinks anything outside the city limits is small town. Small town means restaurants close at 9 p.m. on Sundays, bagel shops are not open 24 hours, and you can tour every museum in less than two days. I decided to recreate the Big Apple as he sees it—a self-contained planet.

First, let's take a look at Polar Coordinates, the rather unusual filter that makes this technique possible. Take a close look at the following image before and after the filter is applied.

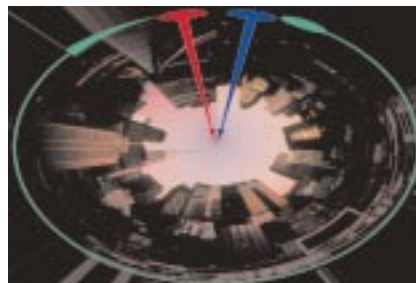
This filter will attempt to bend a rectangular image into a circular one by distorting it until the left



This New Yorker's eye view of the Big Apple is created with the Adobe Photoshop's Polar Coordinates filter.



Before image



After image

and right edges touch, as if you had rolled a flat map into a globe and you are looking down at the

North Pole. The bottom of the image becomes the outer edge of the circle. Any information that touches the bottom of the image will be used to fill in the area between the edge of the circle and the edge of the final rectangular document.

Planet New York City

Open the file "newyork.jpg." Make sure the horizon line is perfectly horizontal. To do this, choose the Measure tool (it looks



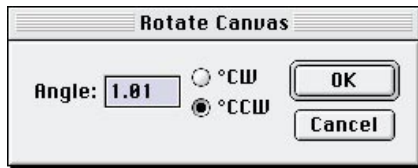
Original image

just like a ruler), click on the left-most edge of the horizon, and drag it to the right-most edge of the horizon line.



Horizon line

Now, to rotate the image, choose Image>Rotate Canvas>Arbitrary and use the default setting (Photoshop will automatically enter the correct value).



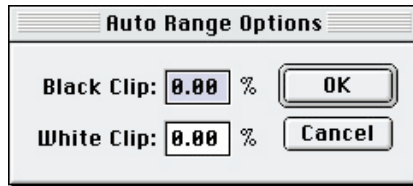
Rotate Canvas

Use the Crop tool (it's hidden under the Marquee tool, just hit the "C" key) to remove any border that is part of the image.



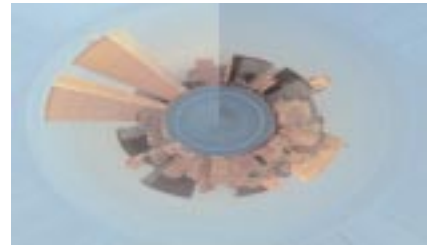
Crop the image

Most scanned images need to be enhanced to achieve good contrast. The following technique is a quick fix, but is not a substitute for true color correction (use only in RGB mode). Choose Image>Adjust>Levels, and option/alt-click on the Auto button. Set the Black and White clip values to zero, then click the Auto button.



Horizon line

To get an idea of how your image will look when you're done, choose Image>Rotate Canvas>Flip Vertical, then choose Filter>Distort>Polar Coordinates and use the Rectangular to Polar setting. When you've had a good look, choose Edit>Undo (cmd/ctrl-Z) and flip the image back to upright by choosing Image>Rotate Canvas>Flip Vertical one more time. Alternatively, you can step backward in the History palette by clicking on the appropriate History level, or by repeatedly stepping backward (cmd/ctrl-shift-Z).

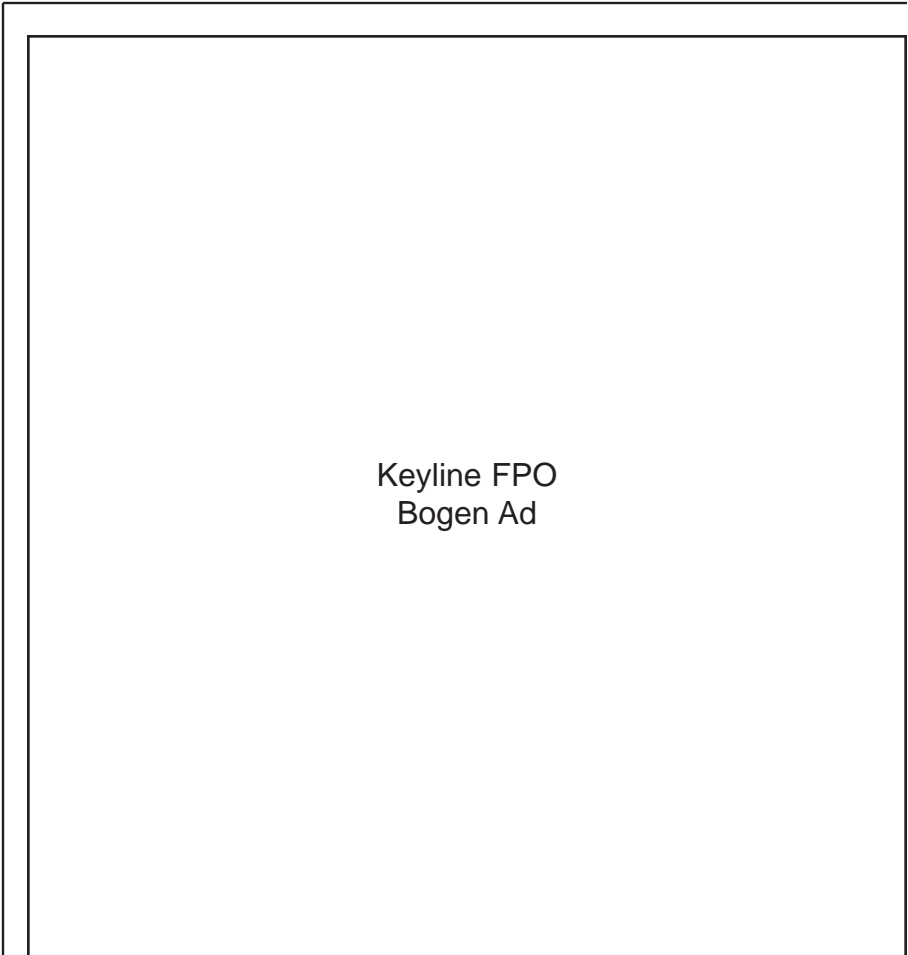


Preview of final image

Since the right and left edges of the sky will end up touching each other after applying the Polar Coordinates filter, you'll need to replace (or retouch) them to avoid a



Replace sky



Keyline FPO
Bogen Ad

seam. Select the sky with the Magic Wand tool, then replace it with a gradient.

Change the foreground color to the color that appears in the sky near the horizon line by clicking with the Eyedropper (a.k.a., the turkey baster). Next, change the background color by option/alt-clicking with the Eyedropper on the top edge of the sky. With the Gradient tool, click on the bottom-most area of the sky, then drag to the top-most area of the sky (hold the Shift key to make sure the line is perfectly vertical).

The right and left edges of the water will also end up touching each other. This usually produces a seam because one side of the water is brighter than the other. We can quickly fix that in just a few steps.

First, select the left half of the water using the Marquee tool. Next, choose Layer>New>Layer Via Copy to duplicate the selected area onto a new layer. Now use the Move tool (while holding the Shift key) to move the new layer until it touches the right edge of the image. Next choose Edit>Transform>Flip Horizontal to make the left and right ends of the image match. You might also need to use the Eraser tool with a soft-edged brush to remove transition artifacts in the center of the image.

Notice the two boats in the water. To get rid of one of them, first choose Merge Down from the side menu of the Layers palette so the entire image is made up of a single layer. Next, using the Rubber Stamp tool, replace the boat on the right side of the image with water.

The right and left edges of the image will end up touching each other, so again, make sure there is no visible seam between the two. To expose the seam that will appear, choose Filter>Other>Offset and set the Horizontal setting to approximately half the width of your document and use the Wrap Around setting at

the bottom of the dialog box.

Tip: click on the Horizontal number in the dialog box and then press the Shift-Up Arrow to change the number setting in increments of 10.



Offset settings



Offset result

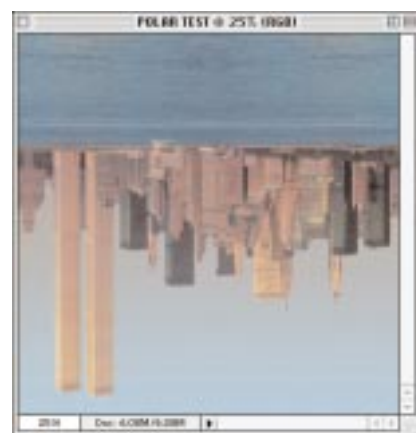
If you look closely, you'll notice a seam in the skyline where one building suddenly stops and crams into another. Use the Marquee tool to select the right half of the building that creates the right side of the seam. Then choose Layer>New>Layer Via Copy and choose Edit>Transform>Flip Horizontal. Now, lower the opacity of the layer you just created and use the Move tool to reposition it so the center of the halves of the buildings match. Now you can bring the opacity setting back to 100% and use the Eraser tool to touch up the transitions between the buildings. Once the seam is no longer noticeable, choose Merge Down from the side menu of the Layers Palette.

We need to do a few things to the image before we spin it into a planet. First, crop away any sky that extends above the top of the buildings. Second, flip the image to vertical by choosing Image>Rotate Canvas>Flip Vertical. Finally, scale the image until it becomes a perfect square: Choose Image>Image Size, turn off

the Proportional check box, turn on the Resample Image check box, and change the dimensions of the image so that the width and height are equal.

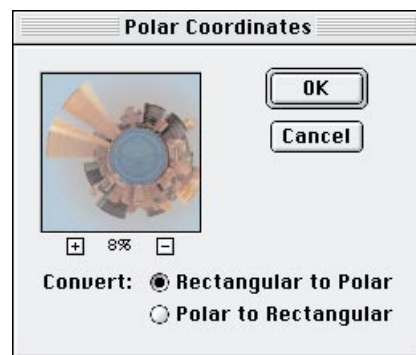


Image size settings



Resized image

Now to turn the image into a planet. Choose Filter>Distort>Polar Coordinates and use the Rectangular to Polar setting. If you've done everything correctly, New York City has indeed become a planet all its own. ◀



Planet New York City

Ben Willmore is an internationally recognized Photoshop expert and founder of Digital Mastery, a training and consulting firm. He is the author of Official Photoshop 5 Studio Techniques (Adobe Press, ISBN 1-56830-474-9). Contact him through his Web site: www.digitalmastery.com.

Subscribe to PEI Magazine!

Fill this in on our web site: www.peimag.com

-Or fax-mail today 404.614.6406!

-Or call us 1.800.786.6277x257

PEI (ISSN: 1060-4936) is published monthly for \$20.00 U.S.; \$33 Canada; \$50 International per year

(Single copies including postage and handling \$4, U.S. and Canada; \$5, International). Back issues are \$4 U.S., \$6 Canadian, and \$10 International.

***Prices Subject to Change.**

Please allow 6 to 8 weeks for delivery of first issue.

Last name:

First name:

Company:

Street:

City: State/Province:

ZIP/Postal Code: Country:

Phone:

Email:

Yes! Sign me up for a one year subscription to PEI for:

US \$20.00•Canada \$33.00•International \$50.00

Charge my subscription to:

Payment: Visa•America Express•MasterCard or

Check (Checks must be mailed to PPA in U.S. Funds with a copy of this form)

Credit card number:

Exp. Date

Name on card if different from subscriber name:

Zip/Postal Code if different from subscriber:

--It is important that you provide the following information:--

Please check ONE that describes the primary activity of your organization:

- _60 Corporate Photography/Imaging Studio 66 Advertising Agency
- _61 Independent Photography Imaging Studio 67 Multimedia Services
- _62 Publishing 68 Commercial Printing
- _63 Computer Graphics Studio 69 Education/Training
- _64 Prepress Services 70 Government
- _65 Service Bureau/Lab 71 Dealer/Distributor/VAR
- _Other 72 :

Please check ONE category that best describes your title:

- _A Owner/Partner/President
- _Vice President/General Manager F Prepress Manager
- _B Graphic Designer/Illustrator G Multimedia Producer
- _C Photographer H Communications, Marketing Director
- _D Digital Imager I Consultant/Systems Integrator
- _E Creative Services Manger/Art Director
- _Other J :