

Coaching: Session 5



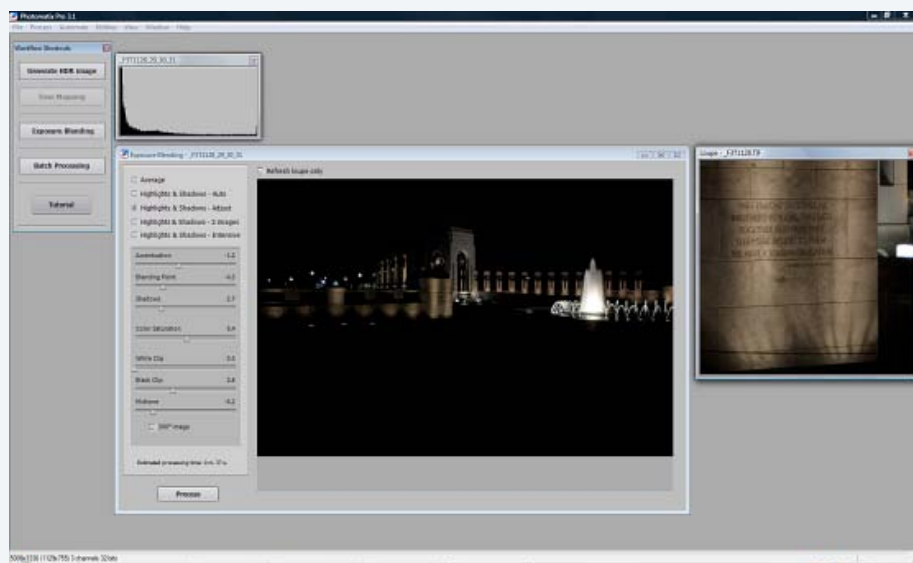
My recent coaching session on HDR generated a question: if you make a panorama that combines exposures, which should you do first? Blend the exposures or stitch the panorama.

I'll use my own photography for this walk-through. I spent an evening last year running around Washington DC for some night shots. One was a twelve shot sequence of the WWII Veterans Monument. Four exposures each for the left side, center, and right side of the monument. I took these with a Canon 1Ds MkII, so they're very low noise for long night exposures. I intended to blend the exposures to increase dynamic range. Exposure was EV 0, -1, -2, and -3. The EV 0 shot already had lots of blown highlights, so I decided not to bother with any overexposures.

Starting with Photomatix Pro

It's a good question. Do the exposure blending first or stitch the panorama. I chose to blend the exposures first with Photomatix Pro.

Owners of PTGui will consider this to be a false choice. PTGui Pro can combine multiple exposures for a panorama using either HDR or Exposure Fusion. My next coaching session will look at that option. The problem that made me pause is the rather klunky interface in PTGui for HDR. You either have to wait for a great many previews to generate on different windows or take your chances and hope the settings are close enough. I opted to use Photomatix Pro for the exposure blending and PTGui for the panorama stitching for this session.

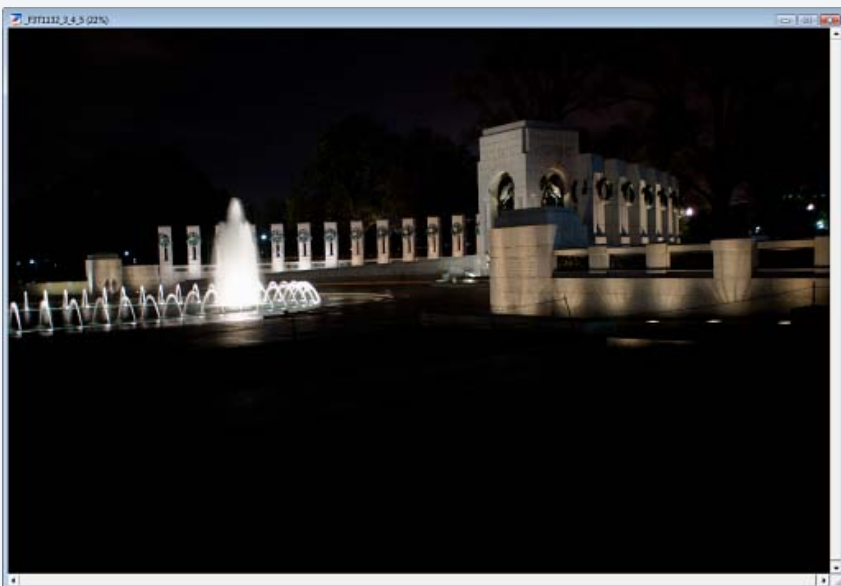
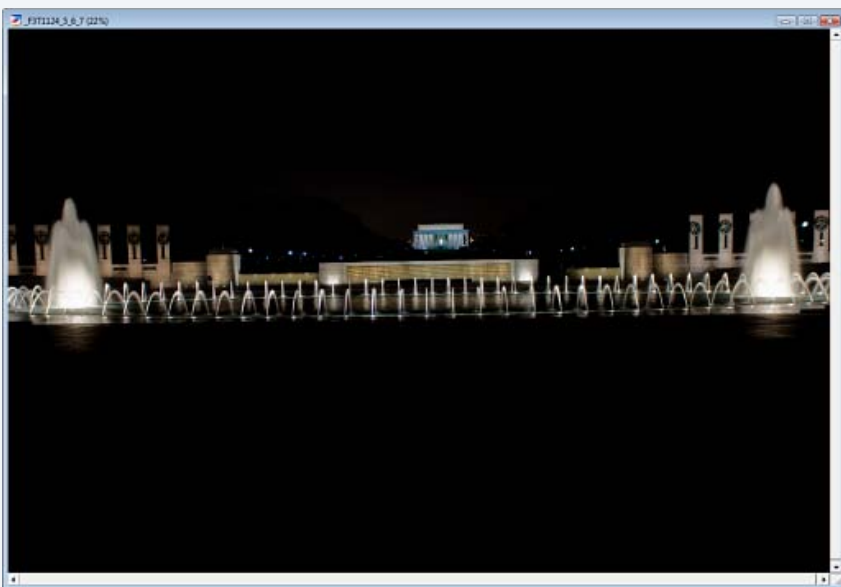


The user interface for Photomatix Pro is easier than PTGui Pro for blending exposures.

Blending exposures is easily done with Photomatix Pro. You start by selecting the Exposure Blending option and then select the photos to blend. For some reason, Photomatix prefers TIFFs or JPEGs for exposure blending. This is not universal among HDR programs.

My original exposures had the wrong white balance setting. I forgot to check the camera settings and the camera was set to use a custom white balance. The photos I shot that evening all had a purple cast. That's fixed easily enough when you shoot RAW. Candidly, I like the effect for some shots around Washington D.C., but it was 100% unintentional. I used Adobe Bridge to select the files, adjusting the white balance in Adobe Camera Raw, and then saved them directly as 16-bit TIFFs from Photoshop.

The photos were four exposures each for three overlapping portions of the scene. You can see the exposure blended results below.



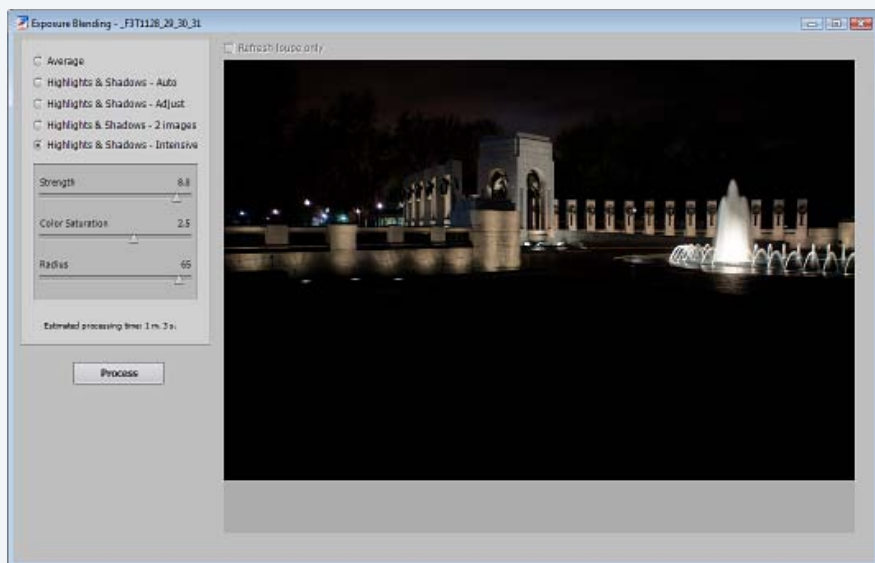
The advice from the Photomatrix manual is that Exposure Blending will tend to render a flat image when there's a very wide dynamic range. I looked at HDR and tone mapping. Even with the defaults, I found the HDR effect to be too unnatural and noise was a severe problem. I also noticed that the Exposure Blending result wasn't so flat at all.

HDR will tend to amplify any noise that's present. Exposure Blending tends to reduce evidence of noise. That was certainly the case here. I felt no compelling need to apply noise reduction at all once the exposure blended photo was in Photoshop. I was also happy with the resulting contrast. I felt that I could punch it up in Photoshop.

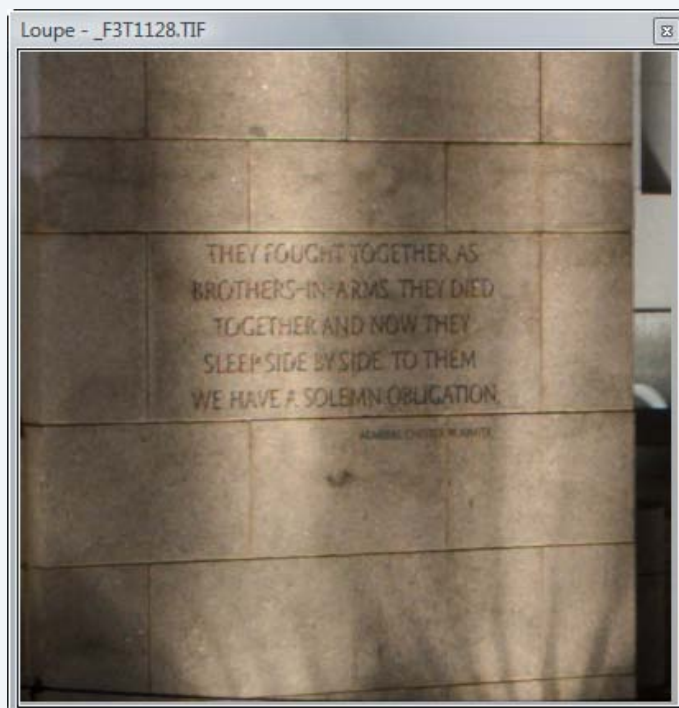
So there you have it. I chose Exposure Blending for the following reasons:

- More natural looking result;
- Less noise;
- Quick and easy to apply.

There are far fewer options with Exposure Blending than there is with HDR and Tone Mapping. There are five options to choose from and none offers more than a handful of settings. I quickly considered the defaults for all five options and decided to use the *Highlights and Shadows Intensive* method. Below are the settings I chose.



The Strength setting controls the intensity of the local contrast adjustments. This will have the biggest visual impact unless you get carried away with the Saturation setting. Saturation controls the intensity of colors. Radius has a big impact on processing time. A large setting will reduce any halos, but it will also add a lot of additional processing time. I watched details with the loupe as I adjusted the settings.



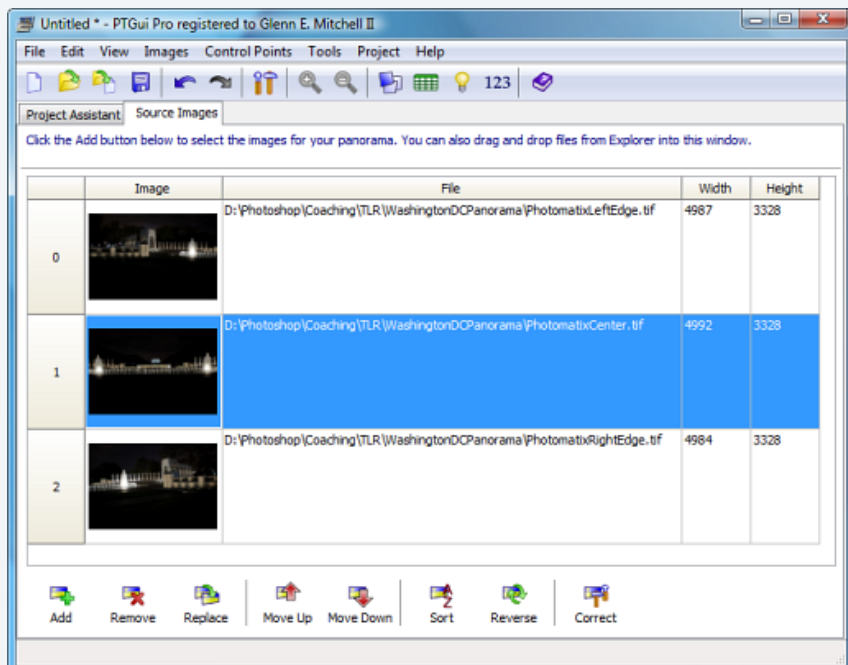
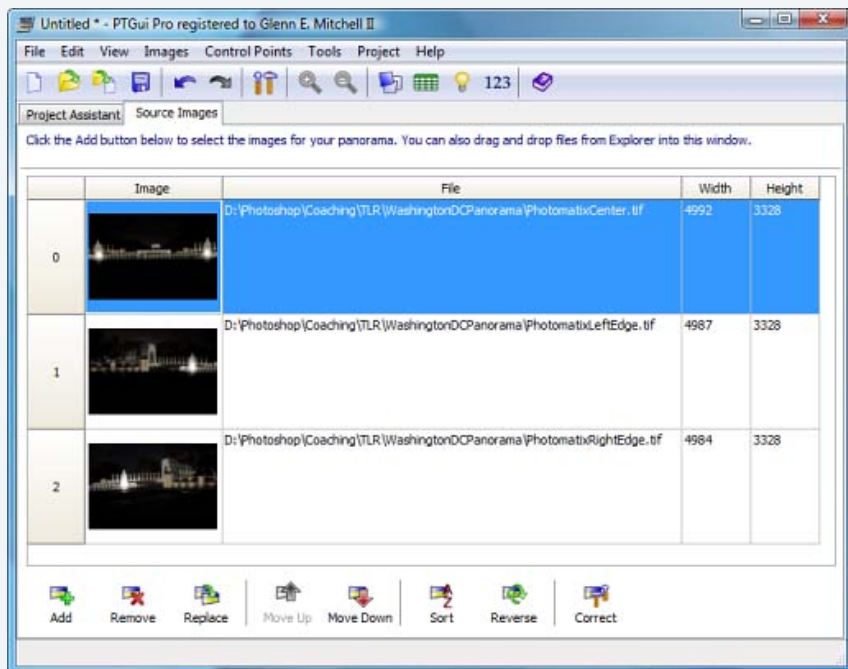
On To PTGui Pro

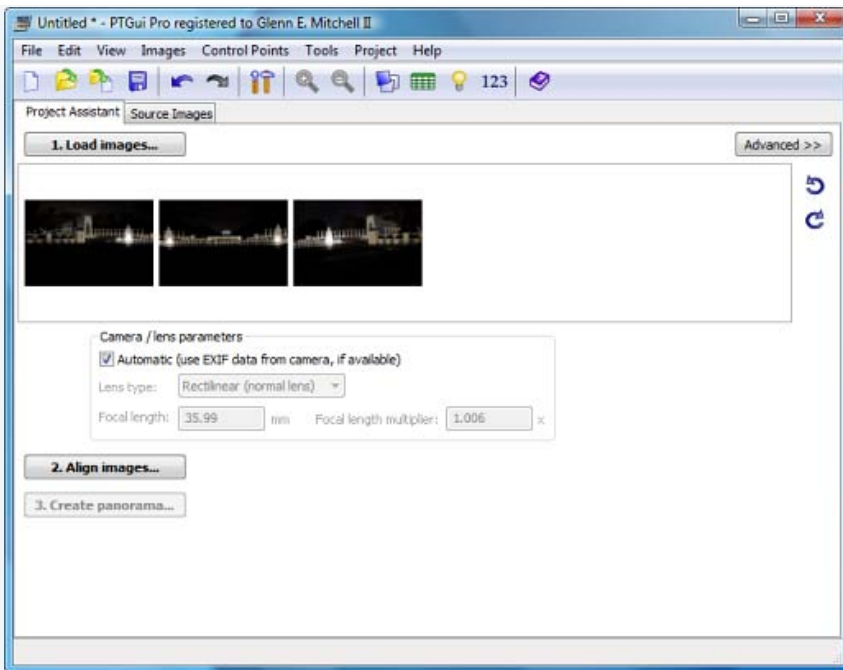
PTGui Pro is an excellent tool for stitching photos. I was able to fly through the stitching of this panorama with default settings.

The user interface can be a frustration. There's a tabbed interface and only a few of the tabs offer their own preview. Worse, those previews sometimes open in a separate window. Those windows are often too tiny for working with panoramas, so you end up having to resize them. You'd think that would automatically resize the preview's display. That would be too easy. You click a button and you wait.

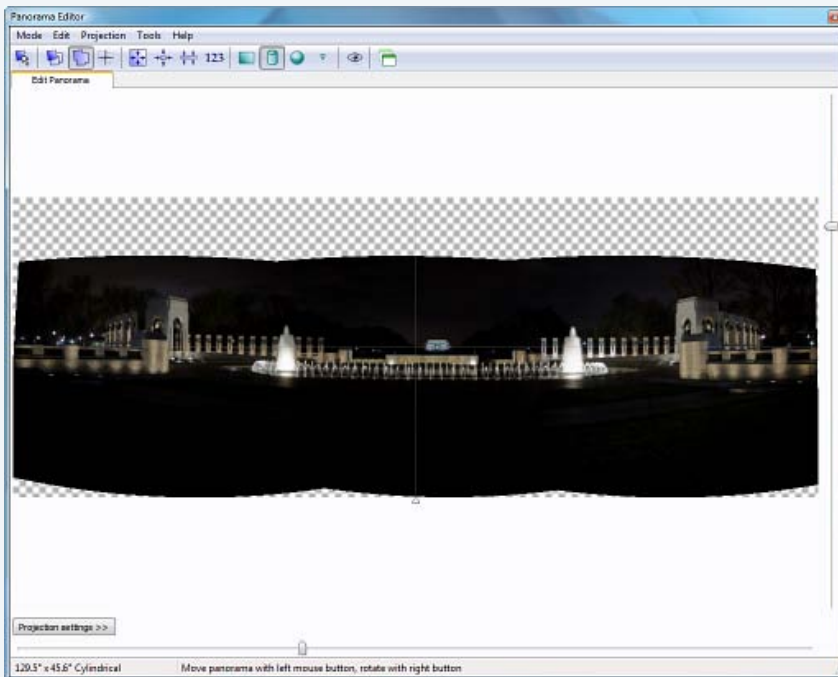
It's the klunky interface that led me to use Photomatrix for the exposure blending (called Exposure Fusion in PTGui). PTGui does a fine job of HDR and exposure blending, but I feel a constant temptation to trust to luck rather than go to the preview tab and wait a couple of minutes each time for the preview to generate after making changes.

I started by loading the source images into PTGui and reordering them from left to right.



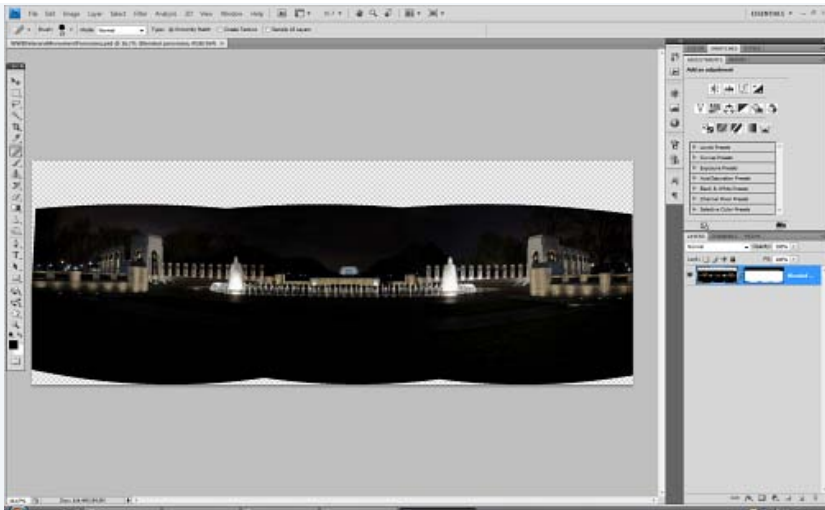


The alignment worked just fine with the default settings. There can be tricky panoramas where some manual intervention is necessary. PTGui offers fully automatic stitching and manual intervention. I didn't need to finess the stitching. PTGui did just fine by itself.

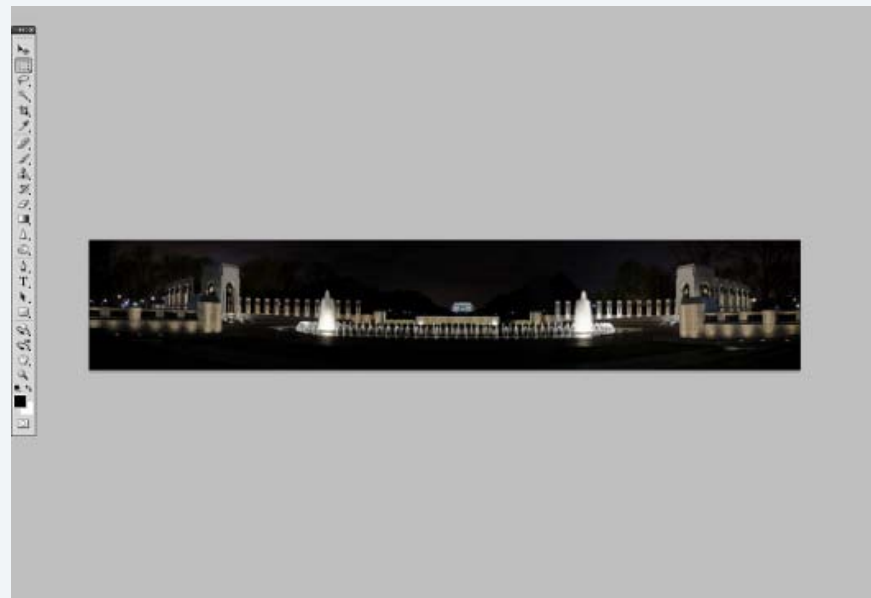
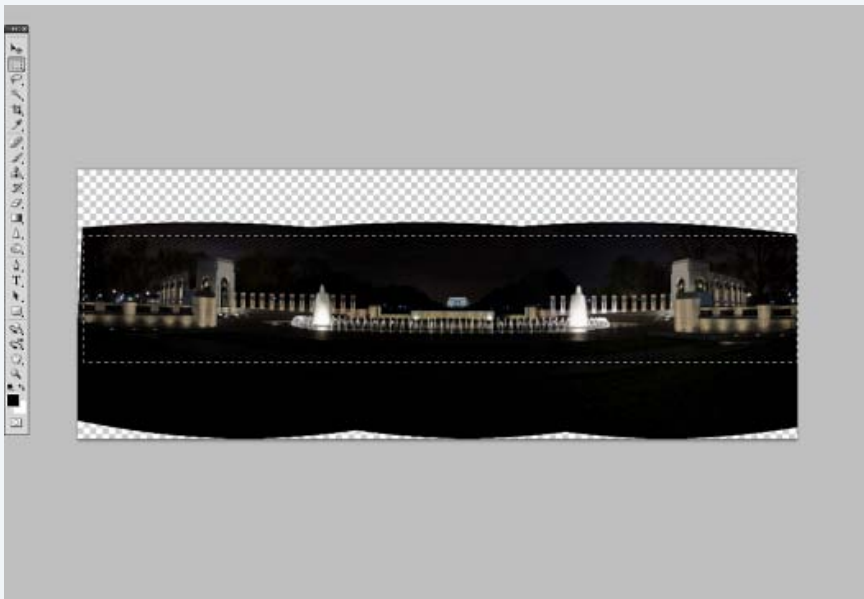


Finishing In Photoshop

The final step was to save a .PSD file for loading into Photoshop. PTGui Pro can also generate a TIFF or JPEG, if that's your preference. Optionally, the .PSD file will include a layer mask. I chose that option. If you want to visit the settings later, you should also save a project file from the *File* menu item. That's separate from the panorama photo, and PTGui will remind you, if you forget to save one. You can see the layer mask in this screen capture below.



The work in Photoshop began with cropping. There was a lot of detail-free foreground. That was expected. I was using a wide angle lens. A Canon 17-40mm "L" lens set at 36mm. The crop was easy with the Rectangular Marquee tool.



Let's take a quick look below at the photo before making some basic adjustments to tone and contrast. This is a crop to make the adjustments to see.



The blended exposure from Photomatix Pro was quite nice. This was a good foundation. Some basic Photoshop maneuvers could enhance the color and the contrast, leaving a very nice photo.

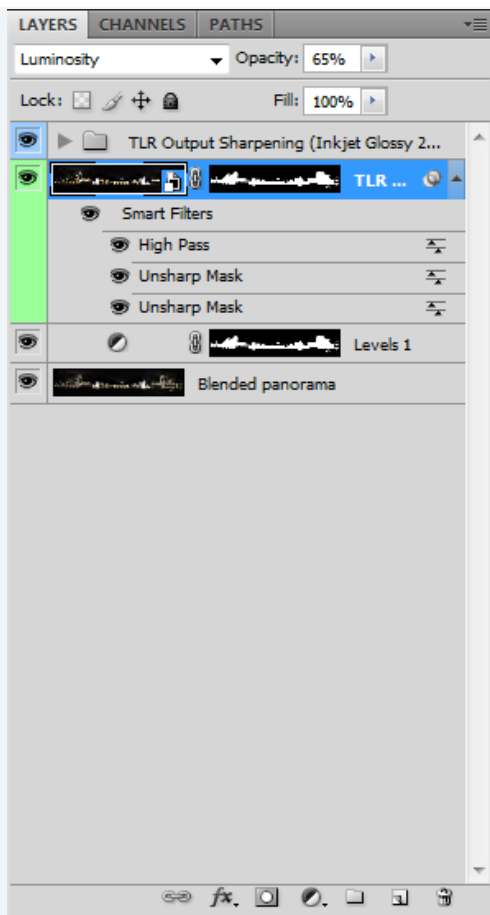
The Levels adjustment was basic. I simply used the white, gray, and black eyedroppers to adjust white balance. I used a Photoshop adjustment layer for this and those effects were minimal. The big improvement came from setting the Layer Blend to Overlay mode. You could use Soft Light for less of a contrast boost. I reduced the Opacity for the layer to 85% for editing headroom. This single adjustment layer with an Overlay blend added a fair amount of "pop" to the photo.



The trick with the levels command was to restrict it to the highlights. There was detail in the shadows, like the trees in the background and some details in the dark sky. I didn't want them to turn completely dark as a result of contrast adjustments. I only wanted the highlights to change. I made what I refer to as a contrast mask, I used the Magic Wand tool to select the shadows. Then I inverted that selection. That left me with a mask where the background was black and the changes would be restricted to the brighter photographic details.



More contrast and saturation was added with the TLR Landscape Sharpener. This also sharpened the finer details. It works similar to the Clarity adjustment in Adobe Camera Raw. It uses High Pass sharpening restricted to the middle tones. The contrast mask was used here as a layer mask, too.



The Opacity was reduced to just 15% for the creative sharpening with the TLR Landscape Sharpener. I wanted to enhance fine detail, but I didn't want to enhance noise or overdo the creative sharpening.



The final step was to apply output sharpening. I used the TLR Output Sharpener. I chose the 240 ppi glossy inkjet action. I pulled back again on the Opacity, using 25% for the light sharpening contour and 20% for the dark contour.



This is a small version to fit in the left gutter on this Web page. If you click this link, you can see a larger version.

Enjoy! Comments are welcome.

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