PANORAMA

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PANORAMA relies on articles and photographs submitted By IAPP members and from all panorama enthusiasts. For submission guidelines, please visit: http://www.panoramicassociation.org.

In this Issue

Message from the President:

I would like to thank the IAPP Membership for the honor of being elected as president of our wonderful association My 5-year involvement with this group---first as a member, then board member, then treasurer---has inspired my shooting, stitching and exhibition work.

I would like to outline a brief set of goals to provide our membership with years of inspiration, techniques and opportunities to make the panoramic experience more enjoyable and rewarding.

Technology is progressing at an increasing rate, and this provides panoramic photographers with many new hardware and software and web-based tools, at low cost and ease of use. We would like to expand applications and markets, as well as open up additional opportunities for public / private partnerships.

As our first goal, we are in the process of developing a new "IAPP Panoramic Lab" which will ultimately include a historical overview of the presentation and promotion of panoramic images. Currently, we have plans to solicit and showcase members' panoramic images printed on various media as examples of commercial, decorative, textile and fine art applications (bookmarks, scarves, murals, curtains, clothing, rugs, etc).

In addition, the lab (which will be open for public viewing) will contain a 360-degree Cyclorama Tent to view our 360-and

180-degree images in large scale using 6 video projectors. This will allow our members to submit their own images electronically to be projected up to 35 ft wide.

This approach is great for several reasons, one being that it is faster and cheaper to project than it is to print images at theses large-scale sizes, as well as inspiring future series of large panoramic photos such as capturing immersive images for historical/journalist content, commercial applications, or industrial training backgrounds.

Finally, this is an invitation to our members and outside players---be they institutions, trade organizations or vendor companies---to call or email me and/or one of our board members with suggestions of new ideas (and possible outside sponsorships) for current or future projects/experimentation. We hope to hear from you in the near future and welcome any and all ideas.

Sincerely,

Francis Gardino
President, IAPP
President@panoramicassociation.org

Editor's Notes:

In this issue we review our successful conference in the Chicago area. A big thanks to Tom Sheckels for planning such a great conference along with some local leg

work by Elliot Miller. It will give a taste of the sights that were enjoyed by all who attended.

Our hope is that this will encourage more members to attend our next conference scheduled for April 2019 in the Boston, MA area. Our host in Boston will be our current President, Francis Gardino. From what we have heard so far, it is going to be a wonderful conference. Watch our Facebook page and check our website for upcoming details.

I was recently asked what happened to the gallery edition of PANORAMA? Well, it has not gone away. However, for us to publish that edition we need content from you our members. That means your images. We had so few members submit their works last year that it did not justify the printing and postage costs. So, it was decided that the images we did receive would be combined with the conference issue and have a mini gallery section. Our next planned gallery edition will be published in December 2018. We will be accepting images now through December 1st, 2018. Please size them at 12 inches (on the long side) at 300ppi and RGB. You may submit up to four images. All images should be sent to: iapppanoramajournal@gmail.com.

As you acquire new images that you would like published please send them to us on a regular basis so that we will always have an inventory to pull from for future issues. Thank you for being loyal members of IAPP and we hope you will enjoy this issue.

David Kutz

IAPP Takes on Chicago
By David Kutz

On October 15th-18th, 2017, members of the IAPP gathered in Chicago for their conference. It was a time for meeting up with old friends, making new friends and discussing all things panoramic. New equipment, new techniques and trends as well as what to do with legacy items and the possibilities for a panoramic museum in the future.

President Tom Sheckels opened the festivities with the schedule for the week which included a scenic architectural boat tour of the city. A special visit to Panoramic Images and a trip to the observation deck at the John Hancock tower. Sunday evening and Monday morning time were spent on presentations. Lifetime member David Orbock gave a presentation on his latest trip to Cuba. Some panoramic and many general interest shots of everyday life in areas beyond where the tourists venture. Such as the local peoples' cleanup efforts on the island after the hurricanes and shots of how the residents live. David also demonstrated his new Cuban camera that he acquired made from recycled cans.

Paul Speaker presented a learning tutorial on HDR Panoramas De-Mystified (see the accompanying article in this issue). Paul's step by step approach should help anyone to produce their HDR images without any frustration. Paul also presented a way to filter out and remove dust spots from images and how to work with luminosity masks.

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Mark Segal presented some his panoramic aerial work. He discussed his approach to a project from a visual and safety standpoint. Mark started out shooting aerials with Roundshot film cameras hanging below full-size helicopters. Later moving into digital cameras and model helicopters to capture aerials. He discussed his preference for using that type of helicopter as opposed to using multi-prop drones in his work from a safety standpoint. There was also discussion about all the new FAA regulations now imposed on aerial drone photographers and how to follow the rules and who should be contacted before proceeding to shoot in an area.

Jook Leung gave a presentation on how he shoots and designs his virtual panoramas to move and tell a story. His panoramas are a delight to watch as he guides the viewer through a path that shows the whole panorama as a mini movie. Jook also showed the group some of the drone aerials that he has started to produce.

The group headed downtown in the afternoon to shoot some panos and take the architectural boat tour. Due to the heavy rains the week before, we had to wait for the water level of the river to drop so the tour boat could navigate under the many bridges in the downtown area. Thankfully after a three hour delay we were able to depart, take the tour and treated to a wonderful sunset panorama of the city skyline from the waters of Lake Michigan. After departing from the boat, we moved on to Dick's Last Resort for dinner and much liquid merriment with some occasional insults from our cast of waiters.

Among our other speakers that week, Tom Sheckels presented his panoramas from a recent trip to Cuba. Showing some of the bright colors and great old cars from the 50's and 60's that still are running in that country. Also, Tom was able to capture some of the life of the locals including a dance festival. Tom then presented some panoramic shots and photos from his latest trip to the Azores off the coast of Portugal.

New member David Berg presented an interesting program on the Lakota Uprising of 1862 in Minnesota. By tracking down the calendar dates of the events David went to each location on the specific day that each event took place and shot a series of panoramas at those locations.

Fran Gardino showed some of his latest abstract panoramic shots and vertical panos. Discussing the way, he looks at shooting and presenting his images. Fran also discussed his plans for the Frano-vision tent projection system that he was just starting to develop with his son.

The group then departed for another trip to downtown Chicago to meet up with Nick Ulivieri at the observation deck of the John Hancock tower. Nick demonstrated some of the tricks he uses to shoot from high vantage points and through glass windows when necessary. Members then took turns shooting dusk and night shots of the city from the observation deck.

Wednesday morning Matt Lombardo from Pixel Mint visited us to talk about his company's scanning, printing and mounting services. Matt gave us insights on what types of scanners give the best image qualities. How he sets up his workflow and what corrections he uses to clean up a client's image.

Fran Stetina gave us a taste of a four-year project he continues to work on. He is creating his illustrations of Dante's Devine Comedy by shooting images in Luray Caverns. Fran then takes those HDR images and pushes them to extreme colors in Photoshop to come up with his final artworks.

The afternoon was spent on the business meeting. President Tom Sheckels thanked everyone for coming to the conference. He then introduced the new President Fran Gardino and gave the results of the election for officers. Fran then took over the meeting and outlined the projects that he wished to see accomplished over the next 18 months.

In the evening the group gathered for the traditional banquet, to say goodbyes and the awards ceremony for the photo competition. The winners included Elliot Miller, Tom Sheckels and David Berg.

Chicago Bean by Fran Gardino

5

The Presenters
Photos by David Kutz

Tom Sheckels

Mark Segal

Fran Gardino

Jook Leung

Nick Ulivieri

Matt Lombardo

Paul Speaker
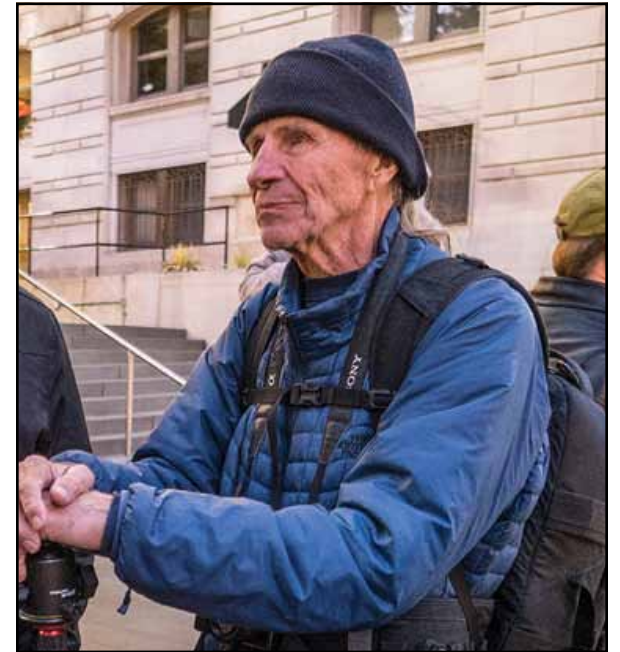
Dave Orbock
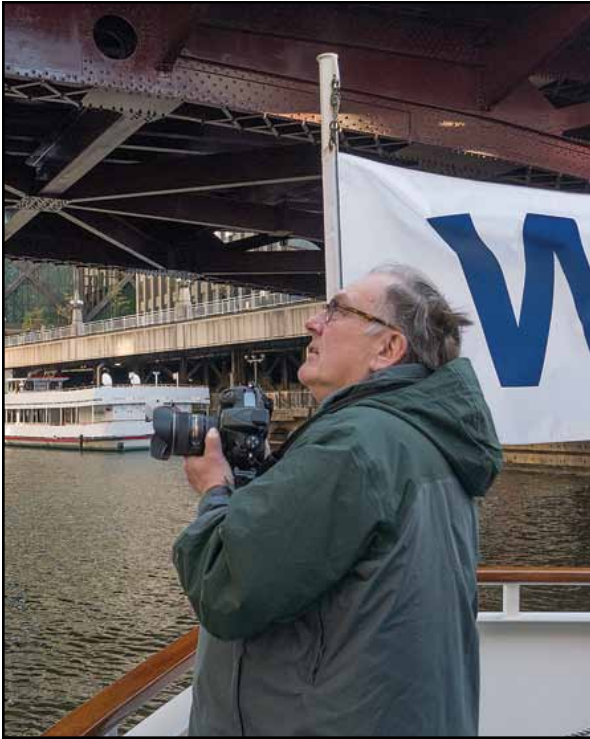
Dave Berg

Atop the John Hancock Tower with Mark Segal and Paul Speaker

Fran Stetina

President and Past-President: Fran Gardino and Tom Sheckels

Conference Activities
Photos by David Kutz

Jook Leung

Christopher Gjevre

Tom Sheckels, Tom Bleich, Steve Delroy, Kay Larkin

Jook Leung and Tom Sheckels

Nancy Speaker
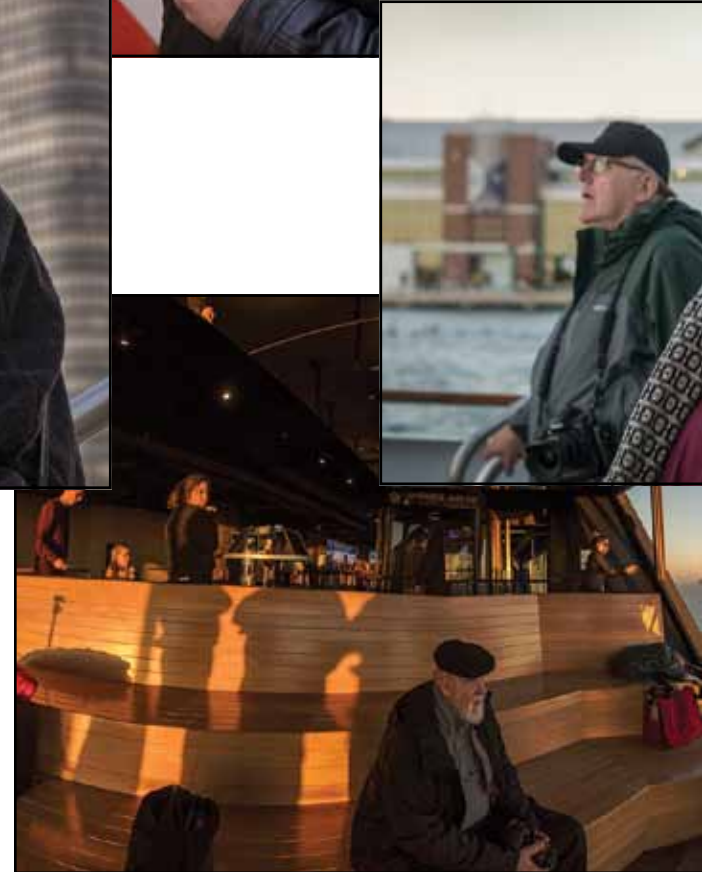
Fran Gardino

Glenn Cope

Kay Larkin

David Berg, Tom Sheckels and Marilyn Berg

Dave Orbock

Steve Delroy

View of the Observation Deck, John Hancock Building. By Fran Gardino.

Conference Print Competition
Photos by David Kutz

Print Winner: Elliot Miller
Kentucky Derby

Architectural Winner: David Berg

Landscape Winner: Elliot Miller
Desert

Print Winner - Cityscape:
Tom Sheckels
Las Vegas

A portion of the competition display.

Overall Winner: David Berg
Ferris Wheel

Open House and Tour of Panoramic Images
By David Kutz

While in Skokie, IL we were invited by Doug Segal, President of Panoramic Images to tour and have lunch at the open house of the remodeled Panoramic Images. The company has been a leader in the panoramic stock photography world and has acquired much of the remaining collection of panoramic photographer Fred Schutz. Doug and his staff are currently scanning, cataloging and preserving Fred's body of work that included many historical large group shots in the Washington, DC area and different important panoramic documentation in Europe after World War I.

After lunch, Doug Segal gave us an overview of some of the changes in the stock photography business and how Panoramic Images is directing their resources and efforts to best represent their contributing photographers, researching and servicing clients requests as well as preserving collections of panoramic works. Michelle Novak, Pi's Director of Photography navigated the group through their new electronic catalog system and showed examples of how to keyword search to find particular subjects.

Doug Segal welcoming conference attendees.

Following the presentations, it was time for touring the facility. The gallery area, preservation library and cataloging stations. In the scanning room they are equipped with Hasselblad scanners as well as a new Phase One capture station for larger Cirkcut negatives and prints.

Virginia Zirkle at scanning station.

Group photo with IAPP conference attendees and staff of Panoramic Images.

Michelle Novak giving scanning demonstration.

Doug Segal giving image processing demonstration.

Chicagoland Cityscapes

Above: Navy Pier at Sunset by David Kutz.
Top Right: Chicago Cityscape by David Kutz.
Middle Right: Evening Skyline by Kay Larkin.
Below: Chicago Night Skyline by Fran Gardino.
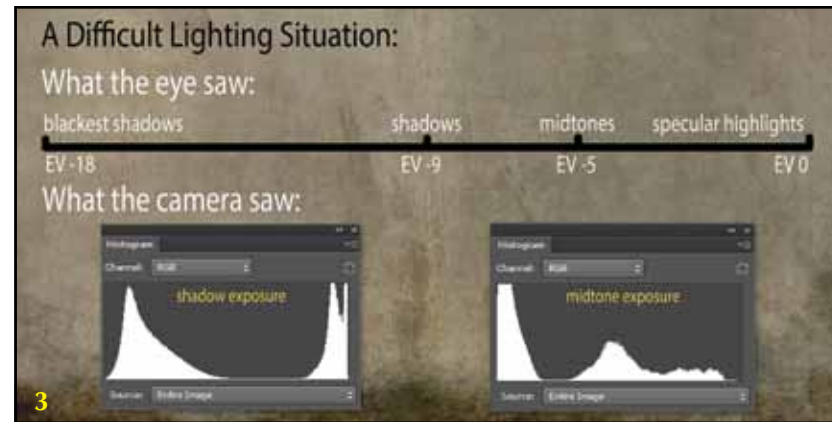
HDR Panoramas De-Mystified

By Paul Speaker
M.Photog., M. Artist Cr., CPP

High Dynamic Range (HDR) is an evolving art form which attempts to capture and render the full luminosity range, as seen by the eye. It utilizes hardware, software, and technique to achieve its goal of rendering detail in both the brightest highlights and the deepest shado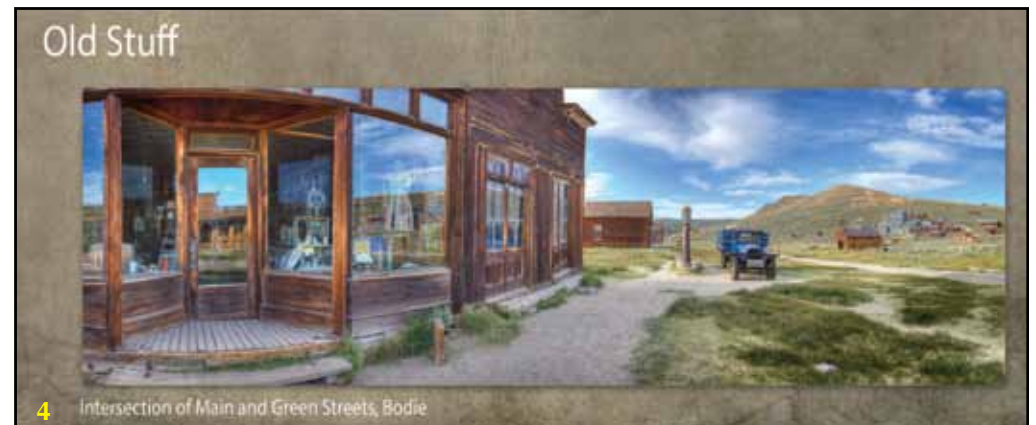ws. It is useful in difficult, high contrast lighting situations. If judiciously used, the use of HDR can expand your opportunities to make successful panoramas in situations you might otherwise pass by.

For example, shooting a pano from inside Indian Cave, located in the Coulee Corridor, south of Grand Coulee Dam, in eastern Washington, presents just such a difficult lighting situation: When the camera recorded the scene (fig-1), properly exposed for the full daylight outside the cave, the inside of the cave lost detail, being almost totally blocked up. Conversely, when the camera was exposed for the inside of the cave, the outside scene became washed out (fig-2). The white clouds needed an exposure of 1/250 @ f16 at ISO 200 (the Sunny 16 Rule). Due to the thin high cloud cover, the overall landscape needed 1/125 @ f16. The shadow at the edge of the cave entrance needed an exposure of 1/15 @ f16, a loss of 5 stops. Finally, to properly expose the rock walls inside the cave, near where the camera was located, entailed another 5 stop loss, to 2 sec @ f16 at ISO 200. (fig-3) While most camera sensors are capable of capturing between 5 and 6 stops with a single exposure, there are very few capable of

A Difficult Lighting Situation:
What the camera recorded, exposed for outside scene
1/90 sec, f13
ISO 200
24-70mm f2.8L at 24mm
4 image stitched pano
Indian Cave, Coulee Corridor, WA
1

A Difficult Lighting Situation:
What the eye saw:
blackest shadows — shadows — midtones — specular highlights
EV -18 — EV -9 — EV -5 — EV 0
What the camera saw:
shadow exposure — midtone exposure
3

Unless noted, all "figures" in this article are identified by a yellow number within the image.

A Difficult Lighting Situation:
What the camera recorded, exposed for inside cave
1/20 sec, f13
ISO 200
24-70mm f2.8L at 24mm
4 image stitched pano
Indian Cave, Coulee Corridor, WA
2

Old Stuff
Intersection of Main and Green Streets, Bodie
4

covering the entire 10 stop range represented by this situation. HDR to the rescue!!!

Hardware - What you need to know before you attempt your first HDR panorama: You can use any digital camera having an Auto Bracketing function. You will need to decide how many images per bracket you wish. Usually, most photographers select either 3 or 5, although some cameras allow more exposures. You will also need to set the exposure increment between exposures. This can range from 1/3 stop up to 3 stops, depending on the camera being used. Check your camera manual to learn how to set the Auto Bracketing (AEB) function. The more images you have in your bracket, the smoother the rendered HDR image will appear. I highly recommend that you change the order of the AEB to run from the darkest to lightest exposure—this makes finding the sequences easier. For most cameras the default setting is Normal, Under, Over. While it is possible to create handheld HDR panoramas, it is much easier to stitch the images together if the camera is mounted on a sturdy tripod (with a pano head, if you have one). The use of a cable release, or your camera's self timer, is recommended to minimize camera motion, particularly on the longer exposures. I recommend setting the camera to expose in High Speed Continuous mode, rather than Single Shot, particularly if the subject has moving elements. Use your fastest memory cards, so you don't get hung up by a slow transfer of data from your camera's buffer to your card. To minimize depth of field shifts, shoot in Aperture Priority Mode, or go full Manual. Remember, **shutter speed should be**

Overhung or Shadowed Areas — Original HDR files

Highlight exposure
0.7 sec at f13
ISO 200
24-70 f2.8L at 24mm

Normal exposure
3 sec at f13
ISO 200

Shadow exposure
10 sec at f13
ISO 200

5 Interior of Blacksmith Shop, Bodie

your only variable. Try Spot Metering—HDR is all about getting one point exposed perfectly, then bracketing around that. Set your camera to shoot Raw, or Raw plus jpg, for maximum post-processing capability. Shoot for the 'basement'— the darkest frame should have little or no detail, as seen on the back of your camera by your eye. Finally, shoot with as low an ISO as practicable, in order to reduce noise.

So, your camera is now set to capture an HDR panorama. What subjects look good? Try Old Stuff (fig-4). Overhung or Shadowed Areas (fig-5). Texture and/or Machinery (fig-6).

Texture and/or Machinery

Valve Table, Keys Ranch, Joshua Tree National Park
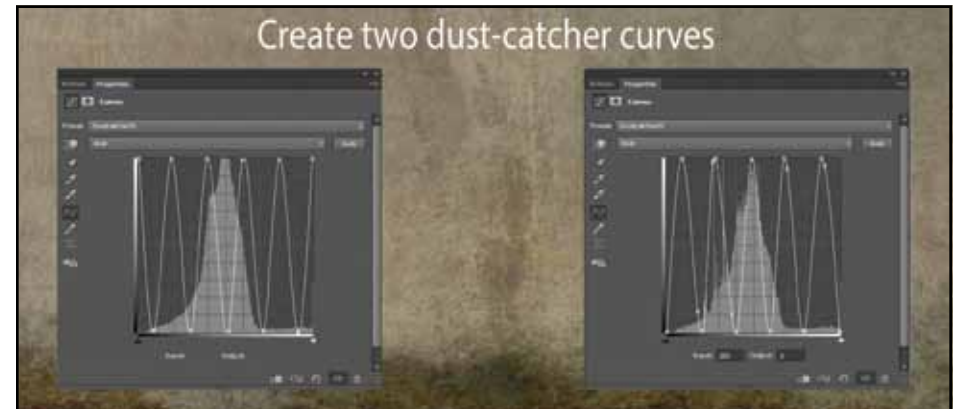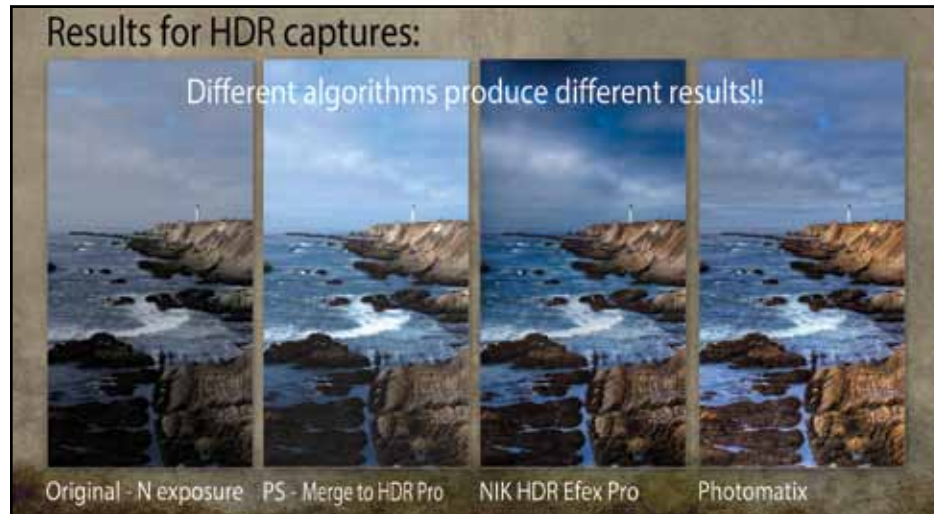
-2.0   N   +2.0

6
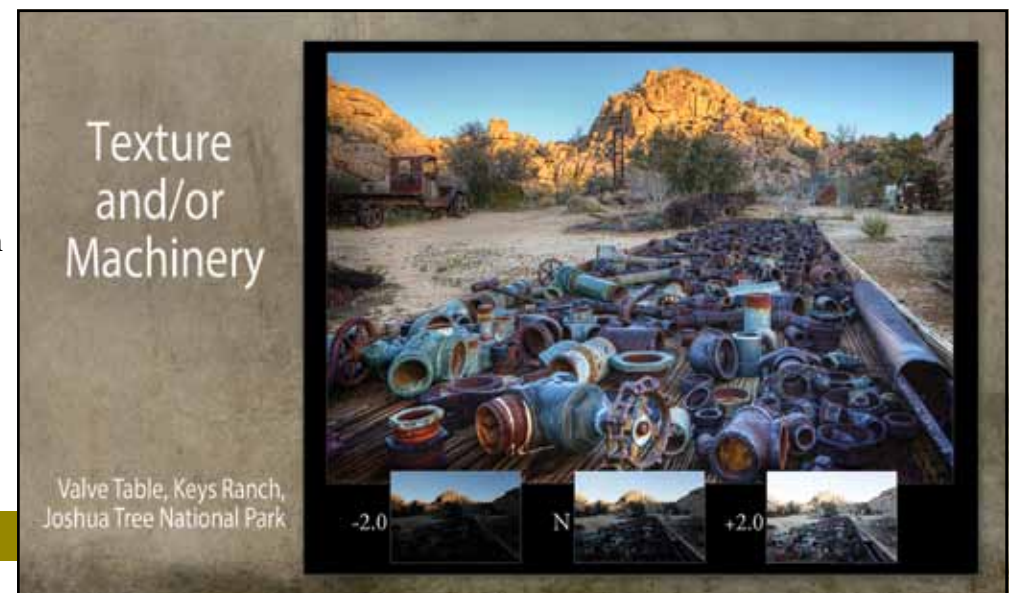
Also worth exploring: dimly lit Interiors, Urban Exploration/Street Scenes, Sci-Fi, Interior Rooms, Angry Men (!!), Twilight Scenes Inside/Outside Windows.

Software - There are many software packages that accommodate your bracketed sets of HDR images. All of us should have Adobe Photoshop installed on our computers. To access the HDR function in Photoshop CS6 through CC2018, go to File>Automate>Merge to HDR Pro. This is also accessible through Bridge or Lightroom. Be aware the first time you access this function, you'll find yourself in a 32-bit environment, and Photoshop will present very few options that work. The trick is to drop the bit depth down to 16 or 8 bit, (Image>Mode>16 or 8) where you will have all of Photoshop's tools available to you. You should also have the Google/NIK HDR Efex Pro applet installed, if for no other reason than because it's free!! Go to http://www.google.com/nikcollection to get your free copy asap. It will load into the filter menu of Photoshop. My program of choice to render my HDR cap-

tures is Photomatix, by HDRSoft, http://www.hdrsoft.com. This creates the tif files that are then brought into the stitching program of your choice. When it comes to actually merging the HDR files, I have PT Gui as a backup, but prefer Photoshop for most horizontal images. Go to File>Automate>Photomerge to start the process. At the bottom of the Photomerge screen, check all the boxes except Content Aware Fill Transparent Areas—there are easier ways to accomplish what this attempts to do. Also, Photoshop will usually use a Cylindrical layout, so checking the Auto button, top left, should work in most cases where you have 4 or more HDR image sets. Each HDR program is capable of producing different results, depending on your vision for the scene (fig-7). There are many other HDR programs, too numerous to mention in this short overview. In fact, entire books have been written about the HDR programs that are available, and new ones are being developed all the time. One of the newest is Aurora HDR by MacPhun, which is now both Mac and Windows compatible, and is a recommendation by

Trey Ratcliff of stuck-in-customs fame.

Technique - Regardless of the software used to render your HDR files, additional post-processing is required. Like any regular image, there should be no visible dust spots. I highly recommend creating two dust-catcher curves (fig-8) to use with a Curves Adjustment Layer on your stitched image. Dust spots are most noticeable in areas of uniform color, e.g. blue skies. (fig-9) Dust spots are usually a round, soft edged area of uniform density that will pop out when an extreme curve is applied (the dust-catcher curves, for example), thus isolating that density, making it easy to see. (fig-10) Use the Spot Healing Brush set to a size slightly larger than the dust spots, with Content Aware selected on the top menu bar. A single swipe across the dust spot should eliminate it entirely. Always run both dust-catcher curves to ensure you've removed all the dust spots. (fig-11) This is much faster than using Lightroom's dust spot correction process, which requires LR match the selected area with a clean area of like

Results for HDR captures:
Different algorithms produce different results!!
Original - N exposure   PS - Merge to HDR Pro   NIK HDR Efex Pro   Photomatix

← Figure 7

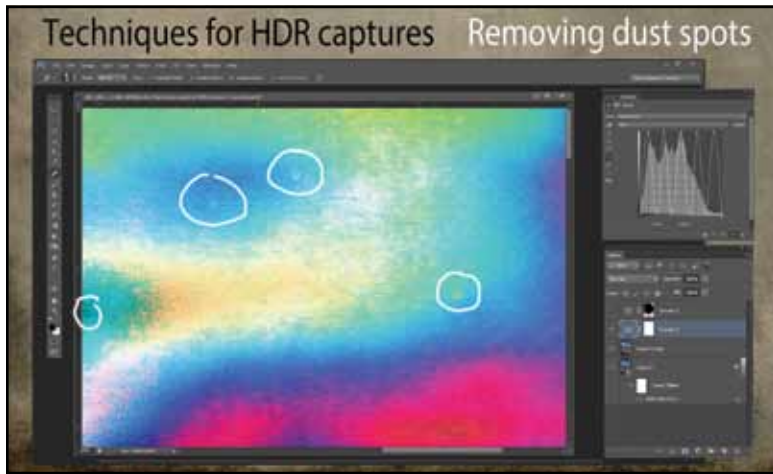Create two dust-catcher curves

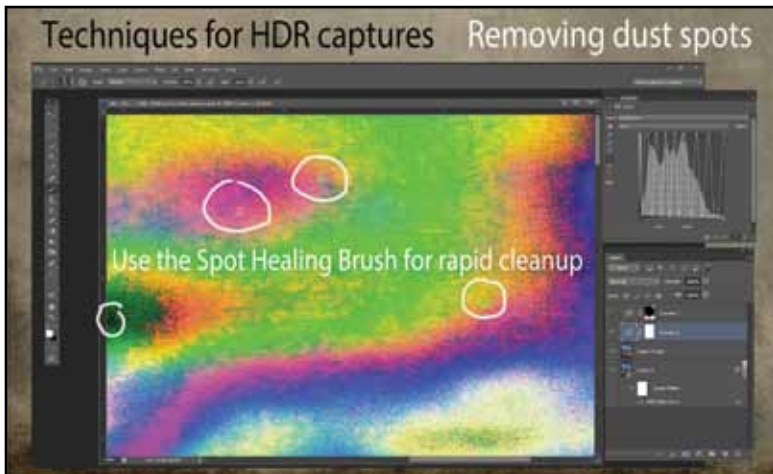↥ Figure 8

Figure 9

Figure 10

Figure 11

density and coloration.

After dust spotting is complete, continue to post-process your HDR pano in your usual manner, using the adjustment layers available to you in Photoshop, including Curves or Levels, Hue and Saturation, etc. Further refine your image using filters, including Photoshop filters, NIK filters, especially Viveza and Color Efex Pro. Topaz Labs has a series of filters that work well, including their Adjust, Detail, Simplify, or Impressions aplets.

Sometimes, if you're not careful, HDR techniques can produce some rather funky skies (fig-12). One way to correct this is to blend in one of the original capture images that is clean. In this case, the Normal image was aligned above the HDR image,

then masked, (fig-13) so the sky of the Normal image is visible, but the good HDR foreground is revealed underneath (fig-14).

Another problem, often encountered when working with HDR images, is haloing at contrast edges, most often seen at sky/land or sky/building interfaces (fig-15). Use the Clone Stamp tool set to Darken mode, a small, soft brush, and sample near the lighter halo to paint in the correct sky and density. (fig-16) In Darken mode, the cloning will not go darker than the source. Change your sample point frequently to avoid any semblance of clone tracking (fig-17).

Finally, add an appropriate vignette, if desired, and save your layered psd file (so you can return to make further adjustments, later), then, flatten, and save again in your normal format. Later, you can crop and resize, as necessary, for specific applications of your image as the need arises. Congratulations!! You've just worked an HDR panorama successfully (see San Diego Skyline at Dusk below)!!

San Diego Skyline at Dusk
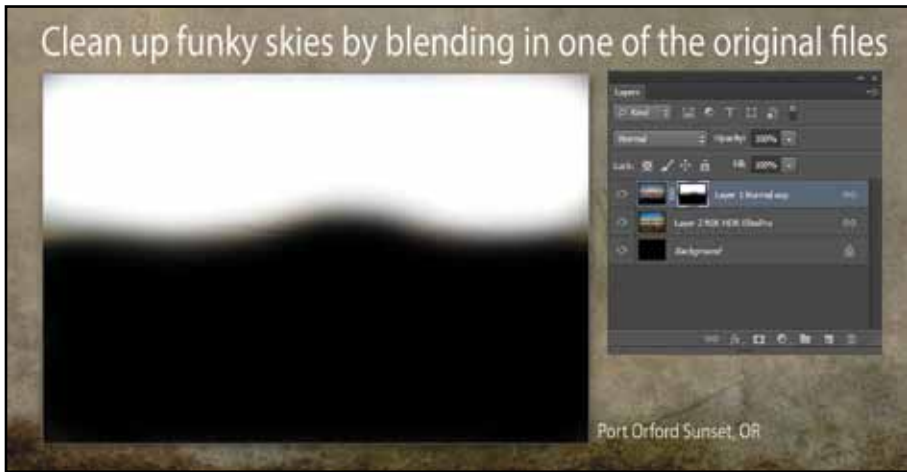
Clean up funky skies by blending in one of the original files
Port Orford Sunset, OR
Figure 12

Clean up funky skies by blending in one of the original files
Port Orford Sunset, OR
Figure 13

Clean up funky skies by blending in one of the original files
Port Orford Sunset, OR
Figure 14

Clean up tell-tale haloing, using Clone tool set to Darken mode
Bodie State Historical Park, CA
Figure 15

Clean up tell-tale haloing
Bodie State Historical Park, CA
Figure 16

Clean up tell-tale haloing
Bodie State Historical Park, CA
Figure 17

The Lakota Uprising of 1862
By David Berg

In the fall of 1862 the Lakota Indians in southwestern Minnesota attempted to retake their tribal lands that they had given up in an earlier treaty with the US. This 'Lakota Uprising' lasted approximately five months, culminating in the defeat and removal of the Lakota Indians from the state of Minnesota in the spring of 1863. The state of Minnesota organized a remembrance of the events in 2012. Anticipating this sesquicentennial event, I developed a personal photographic project wherein I would visit some two dozen of the known conflict sites in 2011 and produce a 360-degree panoramic image of the sites. I determined to take the panoramic photograph on the exact date (and time, when known) that the event occurred in 1862/63. The weather cooperated, and all the panoramic photographs turned out perfectly. The project was reviewed by the Minnesota Historical Society, but it was deemed incompatible with their website design. My plan is to eventually produce a printed volume of the photographs as a personal reminder of the project.

The following photos are representative of the project.

1: Site of the ferry crossing Lakota Indian ambush on US Army soldiers

2: Lower Sioux Agency warehouse interior – HDR

3: Lower Sioux Agency warehouse – first attack by the Lakota Indians

4: Crow Creek, SD, on the Missouri River – drop off site of the Lakota Indians after removal from Minnesota

5: Marker just north of Hutchinson, Minnesota, at the site of the murder of Chief Little Crow, who led the Lakota Uprising

6: Ft. Thompson SD, Dakota Indian Memorial

1

2

3

4

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6

2017 EPSON Gold Award Winners

Pamela Jennings, Run Out

Randall Zumwalt,
Honor Heights,
Muskogee

Katherine McInroy,
The Blue Room

Rodney Campbell

Randall Zumwalt, Oklahoma City National Memorial

Jeff Grant, Landmannalaugar

Randall Zumwalt, Cherokee Nation Courthouse

Julio Castro, Prado - The Best Lighthouse in the World

Hatches Harbor Sunset by Peter Schaible