

# range Bytes

Volume 46 No 4

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\$1.50

## IN PERSON MEETINGS ARE BACK! NOCCC meetings for Sunday Apr 3, 2022

### MAIN MEETING

## Is Cyber Security Really Important, Bob Gostischa - APCUG VTC

### Special Interest Groups (SIGs) & Main Meeting Schedule

#### 9:00 AM – 10:30 AM

**Beginners Digital Photography .....**Science 129

Questions and Answers about Digital Photography

**Linux for Desktop Users.....**Science 131

Beginners' Questions about Linux

#### 10:30 AM – 12:00 PM Noon

**3D Printing .....** Irvine Auditorium

Questions and Answers about 3D printing

**Advanced Digital Photography... ..**Science 129

Questions and Answers about Digital Photography

**Linux Administration .....**Science 131

More topics about the Linux operating system

**Mobile Computing .....**Science 109

We discuss smartphones, tablets, laptops, operating systems and computer related news.

**VBA and Microsoft Access/Excel .....**Science 127

Using VBA code to enhance the capabilities of Access and Excel

#### 12:00 PM Noon – 1:00 PM

**3D Printing.....** Irvine Auditorium

Questions and Answers about 3D printing

**PIG SIG .....** Irvine Courtyard

Bring your lunch. Consume it in the open-air benches in front of the Irvine Hall. Talk about your computer and life experiences.

### 1:00 PM – 3:00 PM Main Meeting

..... Irvine Auditorium  
**Bob Gostischa on security**

#### 3:00 PM – 4:00 PM

Board Meeting.....  
Science 129

Verify your membership renewal information by checking your address label on the last page

Mark your calendars for these meeting dates  
**2022: Apr3, May 1**

Coffee, cookies and donuts are available during the day in the Irvine Hall lobby.  
Foods and drinks need to remain outside the Irvine Auditorium.

“Friends Helping Friends”  
since April 1976

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Special email addresses <a href="mailto:editor@noccc.org">editor@noccc.org</a> <a href="mailto:membership@noccc.org">membership@noccc.org</a>	
Our Website <a href="http://WWW.NOCCC.ORG">WWW.NOCCC.ORG</a>	

**Reminder: Membership expiration dates have been advanced by two years. So expire in Feb. 2020 is now Feb. 2022, Mar. 2020 is Mar. 2022 etc.**

**DAZZLE :** Partial Documentation for Revision 4.0  
4 September 1990

A randomized color pattern generator for MsDOS/PCDOS computers with EGA or VGA compatible color displays and adapters. Performance art for the eyes!

A source of beauty, sometimes subtle, sometimes vibrant, always changing. The image engine has over 30 primary drawing algorithms, most of which have at least two styles of presentation, many of which have multiple internal

# Board of Directors

## Contact information and email forwarding addresses

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drawing variations. There are also an assortment of fades", including split screens and pans, used by the imaging system for greater diversity of presentation. The entire color range of the detected video system is utilized for maximum variety and visual stimulation. The primary algorithms are mixed randomly on the screen, typically from 3 to 8 are overlaid at a time producing a very large assortment of possible displays. Each display remains for a while to be appreciated, then the screen is cleared via one of the fade algorithms and another set of patterns is presented. Mathematically speaking, an exact pattern match might not occur for many days of continuous operation. Of course human perception is far less exacting and will discern repetition well ahead of these extremes, but the general effect is still impressive. Note that the starting patterns of the program will be different each time it is executed, if it seems predictable then exit it and start it over again. How you can run your copy next month.

## Board meeting minutes for March 2022

NOCCC\_Board\_2022\_03\_06

The meeting was held in room 129 of the Chapman University Science Hall. The meeting was called to order by Vice President Jim Sanders at 3:00 PM. Present were: Vice President Jim Sanders, Treasurer Don Armstrong, Secretary Bob Dickson, Terry Dickson, and Dennis Martin. Absent were President Robert Strain and Richard Miller.

**President's status:** Robert Strain attended early activities in the morning between 7:30 AM and 8:30 AM. He unlocked the front doors and then assisted in bringing some chairs up from the classrooms, placing them in the main entrance area and others in the front location of the presentation hall. After conferring with the other members present that early he announced that he would leave to take his son to a school program and would not be able to return to the club meeting that day.

**Secretary's report:** Bob noted that President Robert Strain was attending an activity with his family and would not attend the club board meeting. Bob reported that Richard Miller called in earlier in the day to report he was feeling poorly and would not be attending the club session that day.

Bob noted that the 5 of the 7 board members present were sufficient to conduct and vote on any motion concerning the club business.

**Vice President's report:** Jim sat at the front desk. He thanked those present for their attendance at this meeting. Since he did not know that he would be leading the meeting he did not have a list of club items to discuss.

**Treasurer's report:** Don Armstrong noted that he'd paid any club matters that had been due that month but did not have the material with him to report the details since the last meeting. He did note that he'd purchased three bunches of coffee which he'll give to Bob to put in the coffee storage closet. He had received bills for the months of February and March. He'll work on them next week to get them paid. He received one check for 2 months (but he did not note the specifics being covered by the check.) He gave bob a check in the amount of \$23.00 for coffee items that Bob had purchased and placed in the coffee closet.

**Month Presentations:** Jim noted that he'll work on some idea for a presentation for the next month unless the president gives him some idea to consider. He asked all present to consider some idea for a presentation and to let him know of it.

**Photo equipment:** the whole batch of equipment is in storage. After some comments Jim and Don said they'll have some discussion concerning selling the equipment one piece at a time rather than trying to sell it in bunches. They'll have some discussion on the selling of the equipment.

**Adjourn:** Bob moved to end the meeting. Terry 2<sup>nd</sup> the move. All voted to end the meeting. Jim noted the time was 4:15 PM.



### Photo SIG Denji Ebisu SIG Leader

**F**ebruary's meeting addressed two subjects which were briefly discussed during previous meetings. The first dealt with the identification of insects which I had photographed & made photo prints of but could not identify. The second subject addressed were actions that you could take to determine whether or not a wild life photo print is probably 'authentic,' even though this probably cannot be determined with 100% absolute certainty.

The first discussion centered about an insect called a Progressive Bee Fly. During the meeting, we searched Google Images for a Progressive Bee Fly. To me, the images looked like an insect that I had photographed and made a print of several years ago. That insect photo is shown in Photo 1a, which is a jpeg derived from the Photo 1a print. This insect seemed to have the same coloration and color patterns as the insects from the Google Progressive Bee Fly image search. Photo 1a shows the insect in-flight, hovering in place.

Photo 2a, a jpeg derived from another print, shows an insect that looked to me to be significantly different from the Progressive Bee Fly. To me, there are significant differences in body coloration and color patterns. But I am not an

insect expert in any way, so this insect could still possibly be a Progressive Bee Fly.

The 2nd discussion topic was of assessing whether or not a wild life photo was most likely authentic. I believe that there was no way that you can guarantee with 100% certainty that a processed digital photo is not totally or partially faked. However, you can consider three things to determine whether or not a wild life photo is probably authentic.

First, many wild life photos are recorded using two photo formats, raw and jpeg simultaneously every time a camera photo is saved to the camera memory card. The jpeg format is an 8 bit format that is probably the most commonly used photo format. The raw format is a 12 or 14 bit format set for each camera model by the camera manufacturer and identified by unique photo file extensions. Canon uses the '.CR2' file extension, Nikon uses the '.NEF' extension and Sony uses the '.ARW' extension, for examples. The raw format photo file, can be thought of as a data dump of the information on the camera sensor at the time the camera shutter is fully pressed.

According to Wikipedia, a camera raw file is a file from which digital negative files are derived after reading the raw file in a 'non-destructive' manner. Camera raw files are essentially 'Read Only' files wrt the photo image saved in the files. But raw photo modifications can be saved in files such as sidecar '.xmp' files and/or photo editor catalog files. So prior to viewing an unmodified raw file, you must assure complete disassociation of the raw file with any raw photo modification files. This is can done by viewing the raw file in the raw file photo editor and re-setting the image displayed to how it looked before any changes were made. Sometimes there is a BEFORE button, other times there is a RESET button in the photo editor. Note that depressing

a RESET button may cause the loss of any edits made to the raw file.

So the best way to view a raw photo file before any editing might be to copy the raw file (the file with the .NEF, .CR2 or .ARW extension) into a new subdirectory and then re-importing the raw photo file as a new raw image into an image editor software.

An easy way to view an image stored in a raw photo file is by using the Apple or Microsoft computer operating system programs. But many times, these programs are unable to open a photo raw file so the image stored in the raw photo file cannot be viewed. During the meeting, it was noted that Windows could open the Nikon .NEF raw file and display the image shown in Photo 1b but not the Sony .ARW raw file shown in Photo 2b.

The main advantage of using camera raw files in addition to jpeg files is that raw files record photo data in 12 or 14 bit format whereas jpeg files are limited to an 8 bit format. More detail can be retrieved when processing raw format files. Camera raw files also have meta data which record information such as camera make, model, serial number along with camera, lens & flash settings and other information such as the total number of camera shutter operations as well as the date and time the photo was taken.

So to verify that a post-processed (eg printed) photo reasonably represented the image that the camera sensor recorded at the time the camera shutter was depressed, you could compare the image recorded in the read-only camera raw image with that of the finished post processed image. As a general rule, wild life photos images may be rotated and objects (such as dust or objects not relevant to the photo subject) can be removed from a photo but nothing should be added to a photo.

For comparison, I have included 16 bit TIFF photos derived from the raw files of the respective subject photos, as Photos 1b and 2b. Also, for information purposes, I have included Jpeg photos derived from jpegs associated with the aforementioned raw photos, as Photos 1c and 2c. The photos were cropped to make easier comparison of the printed images but no other photo adjustments were made. Comparison of the photos (Photo 1a with 1b and 1c, and Photo 2a with 2b and 2c) indicate that there were no major discrepancies. It is noted that there was a bug removed from the 2nd set of photos but nothing was added to the photo.

A second thing you could consider when trying to determine photo authenticity is that wild life photos are often taken when both subject and camera are in motion. So cameras used to take the photos are usually capable of taking photos at high rates of speed, usually between 10 to 30 photos per second. So usually, many raw photos are taken of the same subject at nearly the same point in time. So in most instances, there are usually many raw photos of the same subject taken and that could be reviewed. Also, often a wild life photographer will often take photos of the same subject from different perspectives or with a different background. In any case, it is likely that a set of raw photos can be used to determine the authenticity of a photograph.

Lastly, the location in which the photo was taken could be considered. You can get an idea of where the photo was taken by looking at the other photos & videos taken during the same day as the photo in question. Most cameras used to photograph wild life have built-in movie capability. And there is also movie capability in mobile phones that can record the photo's general area conditions.

The photo location is sometimes important wrt

to the amount of photo setup that is allowed. Some wild life photos require complex equipment setups. Many public parks and gardens, have restrictions for use of tripods, flashes, and light reflectors, especially when a support crew is required for photo setup. Many public parks and gardens require a permit for photography when a complex setup is used.

March's meeting was divided into two parts. The first part was a discussion of another bee-fly print which showed the insect in a side view which would be more comparable to the side view photo of the insect that looked like a Progressive Bee Fly. By comparison, the insect in the new photo looked significantly different from but may still be a Progressive Bee Fly. We reviewed how the photo raw file can be used as a check on the amount of post processing photo editing performed by viewing the raw photo file while it was separated from any photo editor side car file and/or photo editor catalog file. Photo 3a - print shows the photo as printed. Photos 3b - tiff is a Tiff file from photo raw file with no changes to the raw photo file. And Photo 3c - jpeg is derived from the jpeg file saved by camera when the camera saved the raw file.

The second portion of the meeting was a discussion about lens mount adapters for mirrorless cameras. At the present time, there are three types on lens mount adapters. The first has no electrical contacts, the second has electrical contacts, and the third has electrical contacts and a built-in motor drive for lens focusing. To date, the only lens mount adapter which has a built-in motor drive for lens focusing is a Sony lens mount adapter to adapt mainly older Minolta & Sony DSLR lenses to Sony mirrorless camera bodies and costs about \$250. However, it is anticipated that over time, there will be more of these type of adapters made by various adapter manufacturers.

During the meeting, we set-up a vintage Nikon 35mm lens adapted to a Sony mirrorless camera body. The adapter used was of the first type which had no electrical connectors. These adapters are the simplest and the lowest cost adapters, often selling for between \$10 and \$30. The electrical connectors are used for camera focusing and lens f-stop (aperture) settings. Since this adapter had no electrical connections, focusing and f-stop settings need to be performed manually.

The camera, adapter and lens setup was placed on a tripod and connected to the room projector via HDMI cabling. This was done to demonstrate how the camera was focused and the effects of lens f-stop adjustments on the camera image. With the Sony, focusing relies mainly on zooming in at various levels of magnification. In a general, I find manual focusing using this method fairly quick, easy and reliable. To focus the lens usually takes a couple of seconds. Although this may seem reasonably quick, it is actually too slow for many camera applications. However, a two second time for focusing is probably OK for some photo situations. Examples include in street photography where a pre-set zone focus system is used, in landscape photography where the time required for focusing is not an issue and in certain types of macro photography where precise focusing is required.

The f-stop was other adjustment that needed to be manually set. It was noted that many modern lenses have no ring to adjust the f-stop of the lens. On these lenses, the f-stop is controlled electronically by the camera body. These lenses should not be used with a lens adapter that has no electrical connections.

The f-stop was set and reset to show the effects that it had upon the camera image. It was noted that for film SLR (Single Lens Reflect) and

digital DSLR (Digital Single Lens Reflect) camera bodies, there is no image brightening performed by the camera body as the image viewed thru the camera viewfinder is 100% optical. So as the lens f-stop is changed from f2.5 to f16 for instance, the camera viewfinder image changes are difficult to discern because the view finder image becomes dimmer and dimmer. Whereas on mirrorless cameras, when the camera is set to auto exposure (camera automatically sets shutter speed and/or iso automatically is set based upon the amount of light available), the image when seen through the camera electronic view finder is of constant brightness. So the effect of lens depth of field is easier to discern and lens f-stop adjustments can be made before a photo is taken.

With the Sony system, zooming in on any part of an image to check depth of field isn't much of a problem. Consistent viewfinder image brightness almost regardless of the ambient light on a photo subject is one of the main reasons why manual lens focusing is fairly easy using a mirrorless camera and why using a low cost lens mount adapter without any electrical connections can be practical. Some of the latest mirrorless cameras can focus in near total darkness.

Many DSLR's have similar capability using the camera back panel display monitor. Nikon calls the mode 'Live View' for instance. However, using an electronic view finder instead of a back panel display for focusing and for adjusting f-stop is easier because a back panel display can be difficult to see in bright daylight conditions.

Next month, we plan to review a lens mount adapter with **electrical connections** which are capable of electronically controlling mirrorless camera lens focus and aperture settings.

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## Editor's Report

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*Editor: Jim Sanders*

As noted, the club is back to in-person meetings at Chapman University. **You still need to go**

**to:**

[https://chapmanu.col.qualtrics.com/jfe/form/SV\\_eVx4H7TOINNChsa](https://chapmanu.col.qualtrics.com/jfe/form/SV_eVx4H7TOINNChsa) to fill out their COVID form, Preferably at home, the day of or day before the meeting.

Once again the March meeting was intended to be a raffle meeting. However, the best laid plans and all that. As a result of all of that, there were not that many members left in attendance. While the raffle has usually run a deficit for some time, it was again decided that there just were not enough people present to buy a reasonable number of tickets. The raffle was postponed till the April meeting. In April, we will try it again with a \$5.00 minimum buy-in by at least 7 members. Remember, parking tickets, and/or wearing a club shirt with badge, gets you a free raffle ticket that would be in addition to the buy-in..

One of the interesting articles in last months' MaximumPC magazine dealt with building a \$600.00 desktop computer

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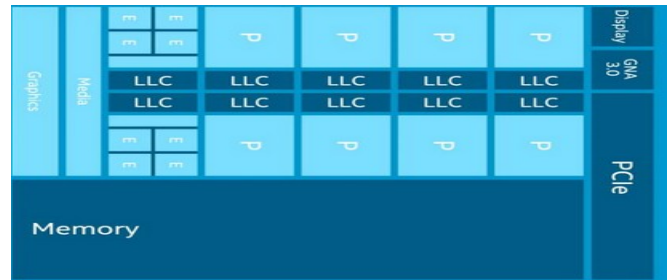
## March Main Meeting Presented by Jim Sanders

The presentation was on Intel's latest and greatest CPU chips. The 12th gen core chips have an all new design that significantly improves performance. The top of the line chips have 8 performance core chips and 8 economy core chips all tied together with a ring communication bus with a separate scheduling computer that determines which cores are assigned which threads.

### FROM INTEL:

The 12<sup>th</sup> Gen Intel® Core™ desktop processor redefines x86 architecture performance. Introducing our new performance hybrid architecture,<sup>1</sup> combining Performance-cores with Efficient-cores to elevate gaming, productivity, and creation. These breakthrough processors assist the OS in intelligently characterizing workloads to ensure optimal core placement for execution and pave the way for future leaps in processor design. Enjoy the full range of the latest platform innovations like industry first PCIe 5.0 readiness and DDR5 mem-

ory. With Intel® UHD graphics immerse yourself in a visually stunning experience with up to 8K HDR support and the ability to view 4 simultaneous 4K displays. 12<sup>th</sup> Gen Intel® Core™ desktop processors are available in a wide range of options for maximum flexibility, so you can choose the performance and thermal characteristics you need to game, work, and create like never before.



## A little Humor

**Wife texts husband on a cold winter morning:  
"Windows frozen, won't open."  
Husband texts back: "Gently pour some lukewarm water over it and then gently tap edges with hammer."  
Wife texts back 10 minutes later: "Computer really messed up now."**

**North Orange County Computer ClubDr.  
 Donald Armstrong  
 709 Rosarita Drive  
 Fullerton, CA 92653**

**To All Members:**

The line above your mailing address now shows your joindate. Please use your join **month** to choose when to renew your membership.

**Dated Material – Please deliver before Apr 3, 2022**

Membership Level (\$)	1 Year	3 Years
Individual Member .....	35	90
Each Additional Family Member ....	15	40
Full-Time* Enrolled College Student	20	
Enrolled High School Student	15	
*Minimum 12 Semester Hours		
Business Member + Ad (Business Card)	180	
Business Member + Ad (¼ Page, ½ Page)	465,	800
Business Member + Ad (Full Page)	1,475	
Contributing Member	75	
Supporting Member	100	
Advocate Member	250	
Patron Member	500	

**Directions to the NOCCC meeting location**



Enter CA-55 N (Costa Mesa Freeway) crossing Interstate 5 toward Anaheim/Riverside for 9 miles. *Notice freeway and street signs stating "Chapman University."* Exit toward E Chapman Ave. Turn right onto N Tustin St. Turn left onto E Walnut Ave.

1) Turn left past N. Center St. for the **best place to park** in the underground parking structure ( Lastinger under the sports field). Pay the small fee (\$2) to park Ask members or [help@noccc.org](mailto:help@noccc.org) about parking details, restrictions, and our price break!

2) Turn left onto N Center St. On the right is the Hashinger Science Center, 346 N Center St. Orange California. Parking on the University side is free. Parking on the residential side is a city violation that may cost you a tow away and a ticket!