Orange Bytes

Award Winning Newsletter of the North Orange County Computer Club

NOCCC Meetings for Sunday November 6, 2016

Main Meeting 1:00 PM   -   Automated Testing

Chapman University student Douglas Woodward and retired programmer Ben Lochtenbergh will present current methods and legacy methods for testing computer software

Special Interest Groups (SIGs) & Main Meeting Schedule

9:00 AM – 10:30 AM

Linux for Desktop Users………………Science 131
Beginners' Questions about Linux

Beginners Digital Photography .... Science 131A
Questions and Answers about Digital Photography

10:30 AM – 12:00 PM Noon

PC Q&A & Computer talk…………………Irvine Hall
For anyone that wants to talk about computer stuff.

Advanced Digital Photography…..... Science 131A
Questions and Answers about Digital Photography

Linux Administration...........................Science 131
More topics about the Linux operating system

Mobile Computing..................................Science 109
We will discuss smartphones, tablets, and the latest computer 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

Advanced PC Q&A……………………………………Irvine Hall
PC hardware, software and Internet topics

PIG SIG …………………………………….. Hashinger Courtyard

Bring your own lunch and consume it on the open-air benches in front of Irvine Hall.

1:00 PM – 3:00 PM Main Meeting

Automated Testing Past & Future ....*Irvine Auditorium*

3:00 PM – 4:00 PM
Board Meeting……………………………………………*Science 131A*

To update membership information	Plan your vacations around these meeting dates
membership@noccc.us	**2016:** Dec4. **2017:** Jan8, Feb5, Mar5, Apr2, May 7.

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

LIFE BEGINS AT FORTY

"Friends Helping Friends" since April 1976

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More Club email addresses
editor@noccc.us
membership@noccc.us
help@noccc.us

Please LIKE us at our Facebook page
Search "Computer Club NOCCC Facebook"

Board of Directors

Board of directors email list

board@noccc.us   entire board

President Ben Lochtenbergh
president@noccc.us   (cell 1949.331.3917)

Vice President Dr. Don Armstrong
vicepresident@noccc.us   (home 714.773.1187)

Secretary Bob Dickson
secretary@noccc.us   (home 714.539.1304)

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Director Dennis Martin
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Director Richard Miller
richard@noccc.us   (cell 714.309.1504)

Director Gerry Resch
gerry@noccc.us   (home 714.772.6667)

Director Jim Sanders
jim@noccc.us   (home 714.544.3589)

Always use these Club email addresses so you do not have to update your contact information every time a personal email address or the board of director roster changes.

The President's Report

President's report by Ben Lochtenbergh

Sunday October 16 we saw one of our own presenting a favorite topic "Photography." Someone said recently while looking at the photos of the 40th anniversary event **"You guys are lucky to have your own photographer."** Indeed, we are lucky in having Larry Klees doing photography in and around our meetings. He had a good meeting. For the main meeting report see elsewhere in this newsletter.

What else is new? How many people will come an hour early because they forget to turn their clock back at 2 a.m. November 6? Will I forget? Hardly, with 3 smartphones, 2 PCs, and 1 smart wife with an iPhone.

Talking about how lucky we are. Our laptop dedicated to NOCCC work went on the blink. Our Treasurer Don could not work with the Windows Vista Toshiba computer anymore. He presented the problem to Jim who took it home with him to his computer repair shop. He does this as a hobby and for profit building custom computers, upgrading existing computers, and repairing broken computers hardware

and software. He, I learned from emails, replaced the noisy hard drive with a SSD (Solid State Drive) with ample capacity. This cost about $70 on parts to NOCCC but no labor cost. How **lucky indeed**!

As a result, the editor has not received an update to the membership dues. Perhaps, if you paid dues recently or changed your mailing address please email membership@noccc.us saying so. Your word will be good and the records will be reconciled later in the treasurer's database. This will assure that members in good standing will continue to receive newsletters.

It is only 3 weeks between meetings. It is interesting to see what effect it will have on Orange Bytes report submissions and attendance.

president@noccc.us

Board Meeting Minutes September 11, 2016

Secretary's report by Bob Dickson

The meeting was held in room 131A at Chapman University Science Hall. The meeting was called to order by President Ben Lochtenbergh at 3 PM. Present were: Ben Lochtenbergh, Don Armstrong, Bob Dickson, Terry Dickson, Larry Klees, Dennis Martin, Jim Sanders, Gerry Resch, and Richard Miller.

Secretary's report: Bob distributed copies of the minutes for the 8/7/2016 meeting. Gerry moved to approve, Larry 2nd, approved.

President's report: Ben thanked Don for emailing him the database so they could keep their databases in sync. Ben noted that he sends out the preliminary copy of the Bytes to the members so they can review the Bytes before he sends it to the printers. He'd appreciate if they could make a review and notify him of any corrections or changes as he usually only has a very short time before he has to send the copy to the printer.

Treasurer's report: Don reported that he withdrew $5,000.00 from the club's investment account and placed the funds in the club's regular checking account. The funds were to be used to cover the two $1,000.00 presentations to the scholarship students at the today's meeting as well as to provide funds in the regular account to cover routine bills.

Don reported that while it was a single withdrawal, which he anticipated would only cost $25.00, the bank changed $50.00 due to the size of the withdrawal. The investment account is in a 'locked' status until February 2017. At that time he'll check around to see if it's possible to have another financial institution cover the investment fund with a better interest rate and a better, lower withdrawal rate. If the funds were to be moved to another firm before that period there would be a large one-time withdrawal fee. Terry made a suggestion that Don also check money market accounts and various financial institutions other than just banks to see if a good deal could be made at one of them. Some Money Market accounts seem to pay good interest rates.

Don reported the regular checking account balance was $5,213.58 (which would be reduced by the two $1,000.00 scholarship checks paid today, and another $1,000.00 scholarship to be paid at the November meeting to the third scholarship student). The market savings account balance was $1,532.27. The raffle today provided $30.00 and the donuts and cookies provided $20.03 *[three cents!?]*. One member renewed his dues for one year.

Don reported obtaining a new Certificate of Liability Insurance covering the club through 9/21/2017. Ben again asked Don to check if there are any savings if the club paid one annual fee rather than monthly payments.

Bytes report: Bob noted that he received the 6 extra copies a couple days before the date of the meeting. He placed them on the entry table. Richard commented that several copies were taken by visitors. Ben noted that all copies must be sent by the printer so any extra copies are being sent to various board members with instructions to bring them to the meeting and place them on the entrance table for visitors and guests to read.

Ben reported to Don that the printer emailed him to inform that the print bills for the months of July and August had not been paid. Don said he'd pay the bill when he receives it. Maybe there is a problem with the email address: it should be sent to treasurer@noccc.us. Ben said he assured the printer the bill will be paid. Don will follow up on the printer's call.

Ben requested that persons writing reports to be included in the Bytes send them to editor@noccc.us.

Raffle report: Gerry reported the raffle income was $30.00. He gave the funds to Don. The raffle prizes were donated a couple of months ago so there was no cost to the club for this month's prizes.

eWaste report: Gerry will call and report to Ben if there will be an eWaste collection next month. Ben requested that Gerry checks with the eWaste guy before the board meeting so that the Consignment person and Newsletter editor are not left hanging every month waiting for telephone calls regarding this issue.
Gerry commented that the eWaste company is working hard in today's market so he'll stay in touch with the company regarding a date to service the club.

Consignment table report: Richard commented that the consignment table presence follows the eWaste so we will know if the consignment table will be set up when we get the eWaste date confirmed.

Bob noted that at the August meeting the eWaste company donated to the club a very nice laptop computer and suggested a price of $140.00. Bob noted that no one purchased it so it was stored in the club's file in the storage room. Jim said he'd checked it out and liked it but that he found it needed a battery. The estimated cost of the battery would be $20.00 so Jim offered to purchase the laptop for $120. There was some discussion about the transaction by the members of the board. It was finally decided to sell the laptop to Jim for $120.00. He would give a check to Don later. He would take the computer home with him after the meeting.

Main Meeting report: The speakers at the main meeting were two of the three scholarship recipients, the third recipient will be a speaker at the November meeting and will be presented with a check at that meeting.

The first speaker was James Wimberley. His presentation was about "SLACK", email-type communications software that is being widely used in place of regular email. It is widely used at the Chapman University by teachers and students. There were many questions and comments by those present about this new software. James' presentation was well received.

The second speaker was William Minnear. His presentation was about "SEAM CARVING", a software used to adjust the pixels in photographs by using a mathematical calculation to determine programmatically how to adjust the color of a photograph. The software is widely used to make adjustments to digital photographs. The subject caused many questions to be raised, indicating considerable interest in the subject by those present.

At the conclusion of the two presentations, Don presented each student with a $1,000.00 scholarship check. Photos were taken of the presentations.

Larry will make a presentation at the October meeting. The subject will be digital photography. The November meeting will be a presentation by the third scholarship student: subject unknown at this time. Gerry said he's in communication with a guy who 'may' be available for the December meeting speaking about 3-D printing. However, it's not confirmed so he'll let the board know by next month after he's had time to talk with the guy about a commitment.

Member's badges report: Gerry happily noted that he'd found a punch to make the badges and it only cost $21.00 so he bought it. He'll be able to make badges if requested but he's currently in the process of moving so it might be 'a little while' before he'll be settled and able to respond to any requests in the near future.

Adjourn: Gerry moved to adjourn, Larry 2nd, approved. Ben declared the meeting ended at 3:40 PM.

Submitted by: Bob Dickson, Secretary
secretary@noccc.us

Main Meeting Report and SIG Reports

Main Meeting Report September

One of the first things that occurred at this meeting was a warning by President Ben Lochtenbergh. The warning was about a warning from Microsoft and concerned those of us who have and use Microsoft Office. In particular, Microsoft Word. He said that he was using the 2013 version of Office, and that he frequently gets a warning that pops up and tells him that he is not using the latest version of Word. His warning is that if you click on that message to update your version of Word, you end up downloading the subscription version of Word. What that means is that you have agreed to RENT the online version of Word for a monthly fee. Not a very good deal if you already own the installed version of Word. As an editorial comment, for most people, the updates to Word are usually superfluous. While I concede that there have been some useful improvements in Word over the years, I often think about a comment made by a writer whose name I cannot remember. "I am probably using numbers that are on the low side, but 95% of the time, 95% of the users of Word, would find that the Word 97 version of the program would do everything that they want to do." I also find it interesting that Word 97 worked just fine on Windows 7, but unlike other programs that worked just fine on Windows 7 and worked just fine on Windows 10, Word 97 was deemed incompatible. I heard someone wonder out loud, "Is that really true, or is it just Microsoft's way of forcing you to buy new version of Office?"

Ben had some additional discussion about his latest adventures with cell phones. I will leave that for discussion in his own column about mobile computing.

He then turned the floor over to Larry Klees the Digital Photography SIG leader. Larry said his primary theme for today's meeting is going to be a little bit of the history of digital photography with emphasis on the more recent improvements in digital photography technology. Starting with how expensive both the early digital cameras were for the quality that they offered and the expense of the memory cards that were available for them. He commented that he has
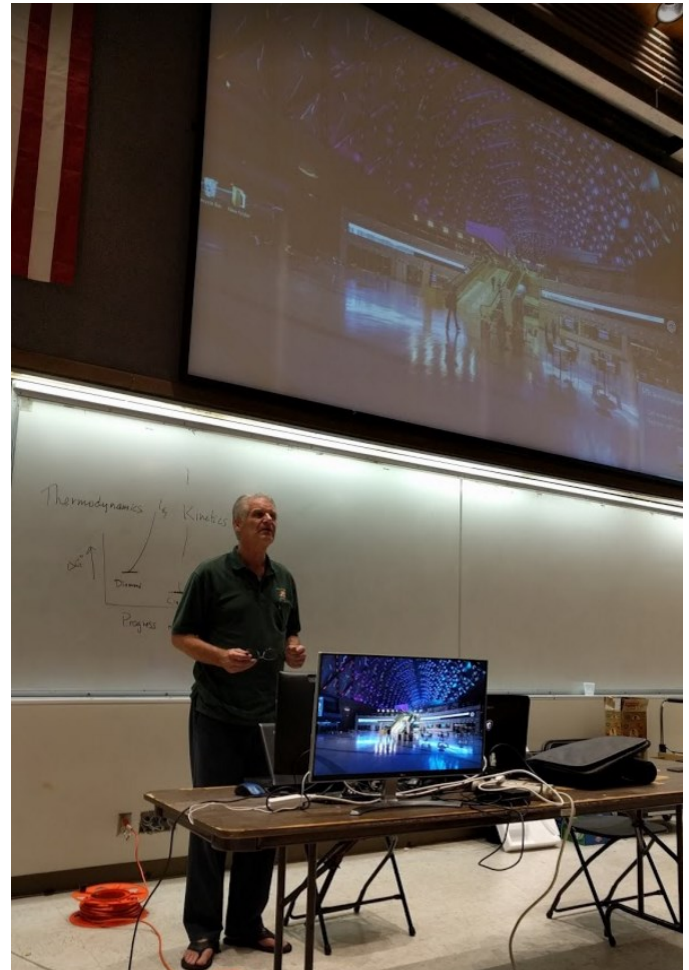
a Nikon camera bias. He believes that the "Holy Trinity" of Nikon zoom lens that he owns are unsurpassed in quality and the menu design on the camera display is the best. Oh, of course he also commented that all manufacturers, including Nikon, have made the menus so large and complex that he doesn't like any of them.

One of his earliest digital cameras was the Olympus E 10, then there was the Nikon D 200, the D 300, the D-800, and the current $2000 D-810. While he still believes that his Nikon is unsurpassed for the kind of photography that he does. He said he has to give Canon the nod when it comes to sports photography that involves fast action. The reason being that Canon offers a burst mode of photography that takes multiple frames very quickly and allows you to catch that crucial moment at just the right time. He then indicated that some of the Sony cameras are quite good for what they are, and interestingly, both the Canon and Nikon are currently using the Sony chips for the brains of the camera.

He then pivoted to a discussion of one of the monitors that he was using. A 27 inch 4K High Dynamic Range monitor. 4K in this case refers to the fact that the horizontal resolution of the monitor is almost 4000 pixels. There are a few other official, and more accurate, names for this technology. However, it is much easier to say 4K. The actual resolution of the monitor is twice that of HD, or 1920 pixels by 1080 lines which equals 3840 x 2160. Even the term HD has come to refer to, and is assumed by most to be, 1080P. The definition of a 1080P High Definition displayed image is: 1920 pixels x 1080 lines using Progressive scan technology. Some people are now using "2K" to refer to that level of tech. There are however. several lesser quality and lesser resolution displays than can legally be referred to as HD. Larry said that the resolution and quality of the display revealed defects in some of the older pictures that he had taken that were not noticeable with the regular 2K display.

Larry spent several minutes demonstrating the downside of purchasing a monitor that has a shiny screen when you're trying to judge the quality of the picture that you have taken. The shiny screen reflects any object behind you that is not flat black while the matte finish screen reduces that quite a bit. Larry

commented that the professional photographers who are doing post-processing on images that they have taken often do so in a room that has been painted all-black and contains almost nothing that can be reflected off the screen. Well, except for your face, and only gung-ho purists will wear a black ski mask to avoid that.

A number of the pictures that Larry used as examples were taken inside of the new transportation hub in the city of Orange. He said that it was very interesting that during the first couple of weeks that facility was open they seemed to encourage photography from everybody with any kind of camera. But weeks after that, the reception changed for anyone who was using a "Real" camera. In Larry's case, his Nikon D-810. His story highlights some of the more stupid mindsets of the TSA types and proves they do "profile," albeit in a pretty dumb way. While using his Nikon to take additional pictures of the inside of the transportation hub, he was approached by an employee that said that he couldn't be taking photos of the facility. When he asked why, he was told they

worry about terrorists "casing the joint." When he asked why the guy about 40 feet away taking basically the same photo with a cell phone wasn't being hassled, the reply was that they weren't using a "Real" camera. Only a "Real" terrorist would use an expensive, large, eye-catching, "Real" camera that surely doesn't draw attention to the user, to case a target. Go figure!

Larry finished up his talk with a short discussion about how modern sensors allow you to take pictures that capture things you can't see with the naked eye. Modern sensors have greatly improved low light capabilities in addition to the higher pixel counts. That, combined with software that allows the camera to take HDR images, can result in amazing photos. In the HDR mode, typically a camera takes one image that is overexposed to bring out detail in the darker areas, one photo at the overall correct lighting exposure, and one photo that is underexposed to tone down the excessively bright areas. The software then combines all three to get the best of all worlds in one image.

Main meeting report by Jim Sanders

Main Meeting for November

Douglas Woodward will demonstrate "Automated Testing." Ben Lochtenbergh will use the remaining time with a PowerPoint presentation about Automated Testing in the 1980s.

Main Meeting for December

Open: the board will take recommendations. We are looking at a presentation by Gene Barrow about the Acronis backup software product.

Main Meeting for January

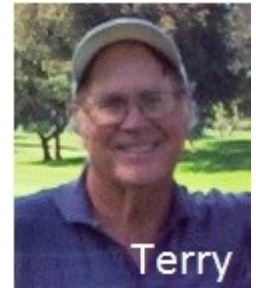Billy Chang and Barbara Chang will demonstrate the latest in 3D printer technology.

Main Meeting for February

Open: the board will take recommendations.

Linux SIG

By Terry Dickson of the Linux SIG

The Linux Sig meets in Science Bld. Room 131 at 9:00 a.m. and 10:30 a.m. this month's SIG meeting was about a little known project called Tiny Internet Project. The article has 3 parts but this month we discussed part 1 only.

The article was written by John Tonello in September 2016. Tiny Internet Project assumes you have some basic computer skills (Windows, Mac or Linux), that you have a couple computers lying around and that you have some time to tinker. The project can be done in whole or in part, depending on your interests and needs. It's particularly designed for educators who want to introduce school-aged kids to Linux. Building the Tiny Internet allows you to use Open-Source software for everything in the project so everything you need will be free to download and use.

When it comes to hardware for this project, the goal is not to have you buy anything new, but to use stuff you already own—perhaps your recently retired desktop, an old wireless router or an old laptop or netbook. If you don't have any hardware like this lying around, ask friends and family. Or maybe some of the club members could help loaning you some equipment Project Requirements the bare minimum hardware you'll need includes:

☐ One 64-bit C that can serve to host all your virtual machines, this computer must be able to support virtualization.
☐ One PC that can attach to a network and run a Web browser
☐ One network switch or router.
☐ Some sort of network-attached storage (NAS).Another old PC that can run Linux to act as a proxy server.

This project is not for the novice, but would be a great learning curve for Linux users. If you would like to learn more about the project, the following web page will explain more about what is needed to complete the task…

http://www.linuxjournal.com/content/tiny-internet-project-part- i?page=0,1

We have not decided if we want to take up a sig meeting to test this project, but if someone would like to give it a shot, and have some fun. Remember As always……

Have fun using and playing with a Linux.

This SIG meets in Science 131 at 9:00 a.m. and 10:30 a.m.
terry@noccc.us

Mobile Computing

By Ben Lochtenbergh, Mobile Computing SIG Leader

Thanks again for an attendance of a dozen at the meeting. We may be doing something right. Of course, small powerful portable devices is the thing today in the media and advertising which i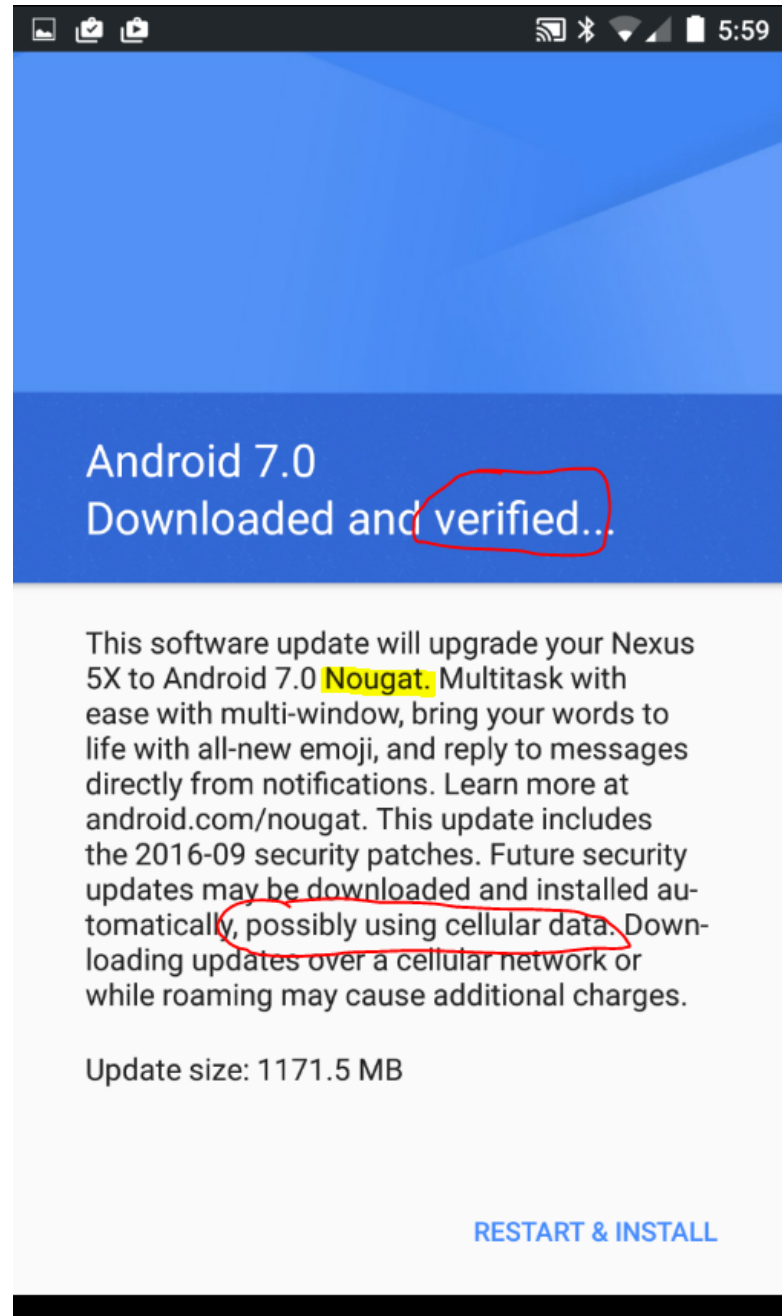s what this SIG is about mostly. Devices are getting more powerful and cheaper all the time. Three years ago, I was willing to pay $700 for a top of the line Samsung phone; however, it stopped working due to water submersion in August. I had to buy an indispensable replacement ASAP. The first one purchased after the Samsung did not revive cost $128 in a foreign country. I was part of the world again! However, the price and capabilities became dispiriting after I got home and had time to do Internet researches.

The second phone cost $0.00. I got it from AT&T in September because they are planning to discontinue their 2G spectrum. Research revealed $39.99 for this nice ZTE Z831 Maven 2 phone; however, it is linked into AT&T services via its SIM card. At a future SIG, I would like to unlock and root this phone.

The third phone, a Nexus 5X, cost me $99. I received it early October. It has October 2015 (one year old) hardware by LG and the capability to upgrade and update to the **latest Android version** as soon as it becomes available and I want to. This of course because it is a Nexus device, as we all know: no dependencies on telephone companies and/or hardware manufacturers. Just pure Android. I compared phones one year apart and found the October 2016

version hardware a little better than the October 2015 hardware, and much better than my three year drowned old Samsung's best hardware of that time. Today's best hardware costs around $700 still but by comparing specifications I realized the improvements are too subtle. For me it was not worth spending an extra $600 at this stage.

Snapshot about concerns for good a user experience

Android 7 Nougat is really a joy to work with and to discover the new, almost always better, improvements. I get the feeling that every time the Android programmers make a change they honestly try to pass on to the users the best possible ideas without much

or any greedy agenda in the back of their minds. I know advertising is their bread and butter but for now, I find that nonintrusive.

One example of a change is that we now can say "Okay Google" (to a black screen) and ask a search question (verbally). **This without having to open the phone** with a security method. It will answer if it involves general information or else make the user sign in when it involves sensitive personal information before it will give answer(s). I think this is Android, now 7- 8 years old, maturing.

Perhaps interesting is that I installed the latest version of Android two days after I received the Android 6 device. I saw some negative blogs about Android 7 but decided this is the ordinary noise we all have to learn to deal with as part of the free media on the Internet. Most of the complaints were people problems, I saw no major software faults, thus I decided to download and install Android 7 Nougat without sufficient experience with Android 6 Marshmallow. I am experiencing quite a number of nice subtle changes and then one that I didn't like. The one I didn't like was the inability to hide my security pattern when opening my phone. There was no such option, I have used that option since Android 4. This is important to me when presenting my phone's screen via the overhead projector at the SIG. I do not want to show my secret pattern. I sent a comment to Google and about a week later there was an update to Android 7. Installing it immediately, I went to Settings Security Screen lock and set Make pattern visible off. It worked! I'm happy, I don't know of any problems with Android 7, perhaps I should read other people's complaints to find some when I have time. Talking about time, I have not tried fingerprint unlocking yet perhaps in my future.

Last month I started the SIG an hour earlier to make **Chromecast** work with the overhead projector but that was unsuccessful. I have ordered a USB C to HDMI adapter cable so it should no longer be necessary to show phone screens wirelessly.

I'm enjoying the Rapid charging capability of the Nexus 5X. I don't have to **charge it overnight** anymore. When I have a free hour I plug it into the Travel Adapter, as LG calls it, plugged into a wall socket. The phone will display "Rapid charging" and after a minute a something like "Fully charged in 35 minutes." The trick is they issued a 15 W adapter and

a phone that can handle that. When charging same phone via my PC USB A port it'll say "Slow charging" and "Fully charged in 3 hours" or so. New smartphones are coming out with similar rapid charging features. It changed my overnight charging habit, I now charge during the day when I have an hour, I expect it will **change other people's habits** too.

The MC SIG meets in Science 109 at 10:30 am

Advanced Digital Photography SIG

By Larry Klees Digital Photography SIG Leader

For the November meeting we can discuss some of the questions asked at the October main meeting which could have answered better.

When asked what ISO (speed or light-sensitivity of a digital camera sensor) do I usually use; my answer of "about 64 — 200 for some shots, 800 for most fireworks shots, and over 2000 for others" was only partially complete. However there wasn't time to fully answer the question.

Auto ISO (a fairly new feature included on some cameras) gives you full control over the exposure triangle allowing you simultaneous manual control over motion blur & D.O.F. (depth of field) while maintaining auto exposure. This will be demonstrated and explained in full.

Other possible topics to cover are
Vibration Reduction
Improved editing software
What constitutes a "real" camera?
Of course general Q&A can be fit in.

This SIG meets in Science 131A at 9:00 a.m. and 10:30 a.m.
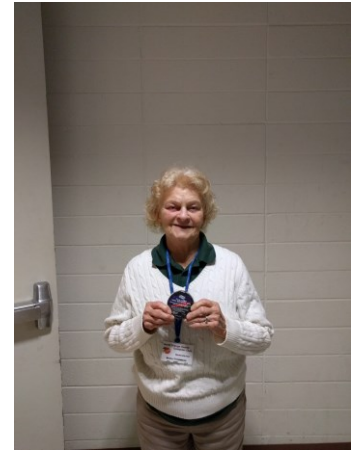larry@noccc.us

More Club Business

October 2016 RAFFLE results

Winner names of raffle by Dennis Martin

General Drawing October 16, 2016

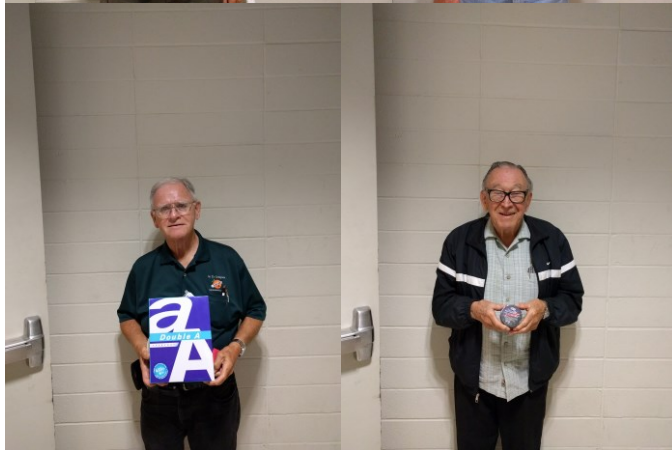|	
Ream of Paper	Bob Dickson
Vinyl Electrical Tape	Martin LaRoque
Enerplex Electrical Charge	Gerry Resch
Project Pro Cable Ties	Ben Loctenbergh
1 Hr. Microsoft Personal Training	Tom Fitzgerald

Membership Raffle Drawing October 16, 2016

Ream of Paper	Dennis Martin
Sticky Mobile Mount	Jim Sanders
Vinyl Electrical Tape	Muriel Fitzsimmons
Project Pro Cable Ties	Gerry Resch
1 Hr. Microsoft Personal Training	Muriel Fitzsimmons

Property	Value
Dimensions	3024 x 4032
Width	3024 pixels
Height	4032 pixels
Horizontal resolution	72 dpi
Vertical resolution	72 dpi
Bit depth	24
Compression	
Resolution unit	2
Color representation	sRGB
Compressed bits/pixel	
Camera	
Camera maker	LGE
Camera model	Nexus 5X
F-stop	f/2
Exposure time	1/24 sec.
ISO speed	ISO-524
Exposure bias	0 step
Focal length	5 mm

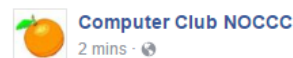*Photographs of winners by Jim Sanders* using Ben Lochtenbergh's new smartphone camera

November 2016 RAFFLE info

Prizes for next raffle

Raffle prizes for the next drawing missed the editor's deadline. Let's hope that Jim's monthly email will provide the info.

Facebook Announcement

Computer Club NOCCC
2 mins · 🌐

Sunday November 6, 2016 at 1 p.m. Chapman student Douglas Woodward and retired computer programmer Ben Lochtenbergh are presenting Automated Testing. It should be interesting to fathom the similarities and differences between the academic computer world of today and the business computer world forty years ago.

Special Interest Groups will meet as usual from 9 a.m. to 1 p.m.

Facebook post for NOCCC by Ben Lochtenbergh

Production

These Orange Bytes created with Windows 10 and Microsoft Word 2013® using the True Type fonts Times New Roman and Arial.
Printed by: Creative Technology,   5959 Palmer Blvd.   Sarasota, FL 34232—2841   800-533-1031

Application Form

Membership application, renewal, or update form

MEMBERSHIP APPLICATION [ ]   MEMBERSHIP RENEWAL [ ]   ADDRESS UPDATE [ ]

EMAIL UPDATE [ ]   PHONE UPDATE [ ]   OTHER [ ] _____

Date: _____ My Membership Number Is: _____

Please Print!

Name: _____

Address: _____

City: _____

State: _____   ZIP: _____-_____

Home Phone (_____) _____-_____ Mobile Phone (_____) _____-_____

Email: _____

Fee schedule is on the back cover of the Orange Bytes Newsletter. $35 Individual Membership.
Membership fees are 100% tax deductible when paid to North Orange County Computer Club.
Amount enclosed $_____   Check # _____   Cash [ ]   Other [ ]
Note: Currently we do not accept credit cards or PayPal.

Please make checks payable to **NOCCC**

Mail to North Orange County Computer Club, PO Box 5841 Fullerton, CA 92838-0841
Or on Sunday hand completed form, with check if needed, to the Treasurer or a Board member.

Version 20161026

Fee Schedule for NOCCC

The fee schedule has been set up to increase club membership, attract people with an interest in computing and attract local computer-related businesses to place ads in the Orange Bytes with or without becoming NOCCC members.

We are also offering members the opportunity to help our club financially by making donations that should be income-tax deductible since we are chartered as a non-profit 501(c)(3) organization. Donors will be acknowledged in the Orange Bytes and the Membership level will be shown on the Member's Badge. **Your regular dues are tax deductible!**

Directions to the NOCCC meeting site

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	

apcug An International Association of Technology & Computer User Groups

Directions to NOCCC from John Wayne-Orange County Airport (SNA) about 12 miles

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

1) 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 may cost you!	2) Turn left for the best place to park. For a small fee park underground in Lastinger Structure under the sports field. Ask members or help@noccc.us about parking options, restrictions, and prices!