

range Bytes



Volume 42 No 8

August 2017

\$1.50

NOCCC Meetings for Sunday August 6, 2017

We will have Consignment Table and E-Waste pickup this month

Main Meeting 1:00 PM

Francis Chao will do a presentation about email.
He **encourages members** to come prepared with questions.

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
- We have room for new SIGs! Share your interests even if one month only..... Science . . .**

10:30 AM – 12:00 PM Noon

- 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, laptops and computer related developments.
- PC Q&A & Computer talk.....Irvine Hall**
For anyone that wants to talk about computer stuff.
- 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. Consume it in the open-air in front of Irvine Hall. Talk about your computer and life experiences.



1:00 PM – 3:00 PM Main Meeting

..... **Hashinger Auditorium**
Francis Chao will talk about email

3:00 PM – 4:00 PM

Board Meeting.....**Science 131A**

Verify your membership information via email

membership@noccc.us

Plan your vacations around these meeting dates

2017: Sep 10, Oct 1, Nov 5, Dec 3.
2018: Jan 7, Feb 11, Mar 4, Apr 8, May 6.

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

Friends Helping Friends” since April 1976

Table of Contents

Main Meeting 1:00 PM	1
Special Interest Groups	1
Verify your membership information via email	1
Plan your vacations around these meeting dates	1
Director contact information with email forwarding addresses	2
Jim video https://youtu.be/iqdCwK6TrZ4	3
President’s report by Ben Lochtenbergh	3
Secretary’s report by Bob Dickson	4
Main Meeting by Jim Sanders	5
By Terry Dickson for Tommy Crenshaw Linux	7
Comparison of Google, Microsoft, and LibreOffice products	8
By Ben Lochtenbergh Mobile Computing	8
Whiteboard explanation about \$398 roundtrip tickets to Paris.	8
August main meeting	8
September main meeting	9
Winner names of drawings by Dennis Martin.	9
Consignment Leader Richard Miller	9
E-Waste Leader Gerry Resch	10
Facebook post by Ben Lochtenbergh	10
Space filler by Ben Lochtenbergh	10
To All Members	12
Directions to the NOCCC meeting site	12

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

Director contact information with email forwarding addresses

board@noccc.us email all board members at once

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)

Treasurer Dr. Don Armstrong
treasurer@noccc.us (home 714.773.1187)

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

Director Terry Dickson
terry@noccc.us (home 714.899.9913)

Director Larry Klees
larry@noccc.us (cell 714.394.1870)

Director Dennis Martin
dennis@noccc.us (home 951.926.3065)

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

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

Director Robert Strain (cell 714.222.2140)
robert@noccc.us

Use these email addresses for club communications

Club Business

The President's Report

President's report by Ben Lochtenbergh



Hello, here we are again. No reason to discontinue these Orange Bytes. Members are still renewing and we get new members every once in a while.

Too bad we don't have more volunteers - for example to mail warning letters - when membership

dues needs to be paid. The club used to have volunteers to do this type of work, perhaps we can start that again. Pertinent information in the form of reports can be emailed to volunteers just ask membership@noccc.us. I guess the only members we have left ☺ are the smart ones ☺ the ones who know to look above their mailing label to determine when they must renew their dues.

When someone fails to see the Orange Bytes in his U.S. mail box this should be a clue that the subscription has ended. One should look at the last newsletter received to see if there is a "sorry line" above their mailing address label; then pay quickly. Processing payments takes time using the old methods of doing the club's business. A good idea is to duplicate payment info with an email to membership@noccc.us. That's how things can be updated at modern electronic speeds.

The board meeting pizza was a resounding success. Thank you Vice-President Dr. Don Armstrong! Make sure you read Jim's Main Meeting report an essay for the ages! <https://youtu.be/iqdCwK6TrZ4>.

This has little to do with anything except that it can be done with any device with Internet access and real or virtual keyboard. Type goo.gl/VuRulK in the search box of your browser and it will tell you 21 uses of rubber bands. Boring? Maybe so but it may encourage members to use their computers more.



The board past a motion to: not delete data and not change code in the NOCCC database without prior approval of the board. Our database holds records of 6000 members going back 40 years. This motion was introduced with examples of a bad code change and a deletion of data. Database integrity we call it.

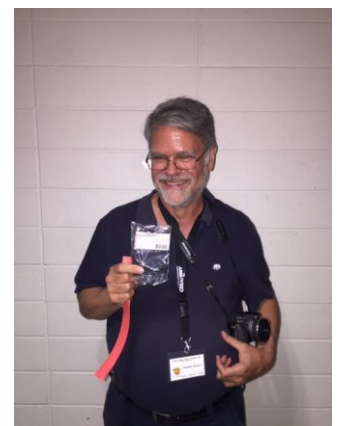
Something new, your president went to a quarterly meeting of computer club presidents of Southern California. It is called SCHUGS and has been going on for 20 years or so. I rideshared with Greg Skalka who on his way from San Diego to La Crescenta passes my house in Irvine. The meeting was informative, they got to learn about NOCCC, and I learned about other computer clubs. I plan to attend the October meeting and subsequent quarterly meetings..

Ben Lochtenbergh
president@noccc.us



*Ben Lochtenbergh with
USB-2 Micro Card*

*Robert Strain with
USB-2 Micro Card*



Board Meeting Minutes

June 4, 2017

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 3:05 PM. Present were: Ben Lochtenbergh, Don Armstrong, Bob Dickson, Terry Dickson, Larry Klees, Richard Miller, Gerry Resch, Jim Sanders, Dennis Martin, and Robert Strain.

Secretary's report: Bob distributed copies of the minutes for the 5/7/2017 meeting. Gerry moved to accept, Richard 2nd, approved.

President's report: Ben announced that the election held at the main meeting was unanimous. All current office holders were reelected to the position they'd held. Ben welcomed a new member to the board : Robert Strain. Ben suggested the board celebrate the election at the next board meeting by serving pizza and drinks. There was discussion about what kind of pizza to serve. Gerry moved to approve purchase of the pizza and drinks, Dennis 2nd, approved. (Note: the cost was not specific but will be paid for at the usual published price.)

Treasurer's report: Don presented data on the balance of funds. All funds are still in the current checking account as a decision has not been made as to what investment should be made that would produce some reasonable interest return. There was some discussion regarding making an investment and not leaving the funds sitting in the checking account. Jim recommended investing in Edison Stock. Ben suggested investing one-half of the savings in the Edison Stock. Don responded that he will check on making such an investment next week and report his findings. Gerry moved to approve the treasurer's report, Richard 2nd, approved.

eWaste report: The truck parked in the parking area but did not block the ramp for disabled persons. Ben talked with the driver and related the discussion that had been had with the university. The driver noted that he was careful not to impede the disabled access ramp. After some discussion the driver will try parking on the other side of the lot in August, away from the disabled ramp to see if that is OK. Otherwise he will park in the loading dock area. He's desirous of supporting the club's program of collecting e-waste as a public service.

Consignment table report: The table was set out and all items were taken from storage and displayed. Some other items were donated and placed on the table. No sales of any items. All items were returned to the storage cabinets at end of the meeting. The next table will be at the August meeting.

SIG Sessions report: No report of attendance at the individual sessions.

Jim suggested the club should consider having a SIG session that is more in tune with current technological levels. He suggested the club should consider purchasing a 3D printer and having a SIG session inviting members to become more familiar with it and its capabilities. There was considerable discussion on the topic.

(2)

While very interesting, the costs associated with having and using the 3D printer were a considerable concern. but there was also considerable favorable interest in the idea. Gerry moved the club should approve up to \$2,000.00 to purchase a 3D printer, Jim 2nd, approved. Jim will lead the function of looking over the available models and be responsible for selecting the model of 3D printer and supplies for it.

Main Meeting report: Ben was assisted by Jim in getting the audio working so the speaker's voice would be heard. Ben used his equipment for the communication and video of the speaker, the chairman of the APCUG. The online presentation lasted about 45 minutes. It was an excellent revelation of all of the features and resources available to the 130 plus computer

clubs that are members of the organization. NOCCC is a member. Members are encouraged to sign on to the APCUG main site and enjoy and use the many features that are available.

The July presentation will be by Jim Sanders. He will make a presentation of early computer equipment, entertaining those present with visions and stories about early versions of computer equipment and showing how it functioned back in those days.

There is no confirmed presentation for the August meeting at this time.

Member badges report: Gerry reported he's still seeking the appropriate tape to use. No new members so no badges are needed yet. Gerry noted that he's holding some badges he made 2-3 months ago for persons who joined at that time. He recommended an email be sent to them to encourage them to attend a meeting to pick up their badge.

Scholarship report: Ben reported he hasn't talked with the university yet.

Web Site report: Richard suggested the club consider using a sponsored web site; just pay to have one. Jim strongly recommended not abandoning the club's 40-year history and our "www.noccc.org" email address. It's widely known. Jim stating he's working on the web site but the cascading pages are complicated. It's a lot of work. There was considerable discussion about the web site. It is out of date and not being currently updated.

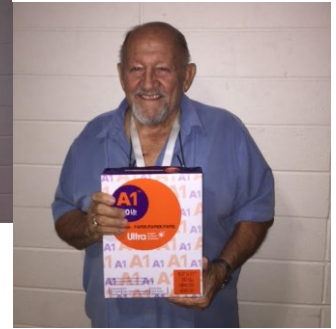
Adjourn: Richard moved to adjourn, Gerry 2nd, approved. Ben declared the meeting ended at 3:52 PM.

Submitted by: Bob Dickson, Secretary

The board meets in Science 131A 4:00 p.m.



Gerry Resch with Ream



Bob Dickson with Ream

Main Meeting Report and SIG Reports

Main Meeting Report

Main Meeting by Jim Sanders

With the Board of Directors met after the June meeting, the question came up as to what the main presentation was going to be at the July meeting. After several "I don't know's" Pres. Ben asked me if I could do something. After thinking about it for a minute, I said I would do a presentation on some of the early, make that ancient, computers that the club dealt with at its beginning. In particular, I was thinking that it would be interesting to get one of the first personal computers, the Imsai S 100 bus-based Intel 8080 computer that used the CPM operating system, running for the show and tell. In addition, in my own personal museum, I have one of the earliest full laptops. A Bondwell Z80, CPM, black and white LCD screen, 3.5" floppy, with enough battery power to run for three hours. A Kaypro II luggable computer. An Atari 800 floppy disk-based system. A Chinese knockoff of the Timex Sinclair computer, and one of the very early IBM PC XT clone computers.



I am sure you have heard the phrase "The best-laid plans of mice and men often go awry." I am here to tell you that I have a new, personal, appreciation for the awry part of that phrase. I thought the Kaypro 2 might be the easiest CPM machine to get going since

when it was turned on, it came up with an insert disk prompt on the screen. A small problem was that I didn't have a boot floppy disk. A Google search turned up several sites that offer images of the Kaypro 2 boot disk. One even had a very nice article about how you can use a Windows XP computer with a particular floppy disk controller and a free to download program that will write the floppy disk image in the Kaypro 2 format. So no problem, I knew I had two old XP computers and two Windows 98 machines that would probably work. So I downloaded the floppy disk image and the free program and tried to fire up the first old XP computer. Nothing happened when I turn on power. The visual inspection revealed that a number of capacitors on the motherboard were bulging and thus bad. I tried to fire up the first Win98 computer but discovered it didn't have a video card.



The second Win98 machine blinked all the boot lights properly, but the video card was bad. The second Windows XP computer used to be my main machine. But when I fired it up a "Battery failure" message appeared on the screen. Usually, one can simply re-do the BIOS settings, and as long as power is still on, you can reboot and it will work. Not this time. On the third retry I made very sure that I did not hit any keys incorrectly while redoing the BIOS and still got failure message. At this point it was clear the bios was not going to let me proceed in less I replaced the battery. Thinking in more modern terms, I went to the store and bought a brand-new 2032 battery. Wrong! This motherboard was prior to the common usage of the 2032 battery as the backup for the real-time clock and bios settings, so I didn't find the 2032 battery holder. Instead, I found, a recognized, the little black box on the motherboard. That's when I realized, as the phrase goes, I had been "hoisted on my own petard."

In the 80s and 90s, I built and sold a lot of systems and a number of components. At the time, I loudly

berated those cheap motherboards that used what I called the \$.19 crystal on the real-time clock that might gain or lose a half minute or more a day. The "good" motherboards use the little black box that was guaranteed to be accurate to plus or minus one second per day and had a built-in lithium battery that was said to last 10 years. Of course, I had to use the "good" motherboards on my own machines. The downside to using that "good" motherboard is that the date of manufacture code on the little black box was 1989. The 10 year battery that is encapsulated in the module probably died 15 years ago and the module is soldered to the motherboard with a half-dozen pins. To put a saw tooth edge on my own petard, that module has **not** been manufactured since 1995. So unless I can jury rig something, my "good" motherboard is now junk!



The early PCs went through several interfaces on the motherboard for a video card. The ISA (Industry Standard Architecture) in both 8-bit and 16-bit varieties, the VESA local bus, the PCI bus, and the AGP bus. I finally found a video card for the first Windows 98 machine and it booted and ran okay even though the three cell rechargeable NiCad battery for the real-time clock had green fuzz growing around one end. The next problem was that this machine only had a 3.5 inch 1.44 MB floppy disk. I needed a working 40 track double-sided double density 360 K 5.25" floppy disk drive. I found a number of 5.25" 80 track 1.2 MB high density floppy disk drives, but no 360K. So I put that project aside and tried to fire up the Bondwell CPM laptop. Even with the charger plugged in there were no signs of life. Thinking the effort to try and charge the old batteries was draining the charge voltage, I opened up the laptop. I found a

big reason the laptop is so heavy. Inside were two 6 volt, 3 amp hour lead acid gel cells. Replacing those brought the unit alive, but after several hours of trying, it still got a boot error.

The next project was the Atari 800 computer system. I was pleased that after being stored for 10+ years, when I turned it on with the Missile Command cartridge installed, it worked! One of my two floppy disk drives has a problem, but the other work fine. It booted Atari DOS from a floppy and played all the games on the disk. I was really surprised, and really pleased, that of the twelve 30 year old floppy disks that I tried, I had 1, and only 1, read error. Yea! At least on working system for show and tell. I was also very surprised at the amount of STUFF on the Atari 800 available for download on the internet. The biggest surprise is that one site had PDF copies of 188 copyrighted books on Atari topics downloadable for free. The Altirra Atari 800 emulator runs on current Windows machines and is said to be very good. You may find the following site interesting reading: http://forum.asrock.com/forum_posts.asp?TID=1236.



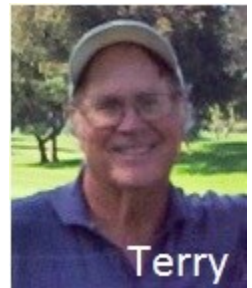
Surprise, Surprise, when I flipped the power switch on the 8088 based PC XT clone, it booted MSDOS 6.22 from the 10 Megabyte stepper motor based hard disk and ran perfectly. Equally surprising, the Timex-Sinclair (first under \$100 Z80 computer) gave me a prompt and ran the Basic program that I entered. A looping program that printed "Hi, I am a Timex Z80 computer." 15 times and erased the screen before repeating. It is so fast that you can almost see each letter as it appears on the screen. In the time I had, the best I could do with the Imsai S100 computer was clean it up for display.

A fair amount of the history of these machines and how they intertwined with the history of the club was covered during the show and tell. I was given a hard reminder of how much more complicated the multitude of hardware details were to deal with and how much I had forgotten of a lot of those hard earned details. A lot of it came back as I worked on it, but a lot didn't. None of this modern "Unknown hardware detected" followed by "Searching internet for drivers" followed by "Installing drivers" followed by "Device ready to use." I still intend to get the old computers running, but it is going to take a lot longer than I anticipated.

Linux SIG Report

By Terry Dickson for Tommy Crenshaw Linux

The office suite available with the Linux software is used in a test sample. Some of the text is from Wikipedia.

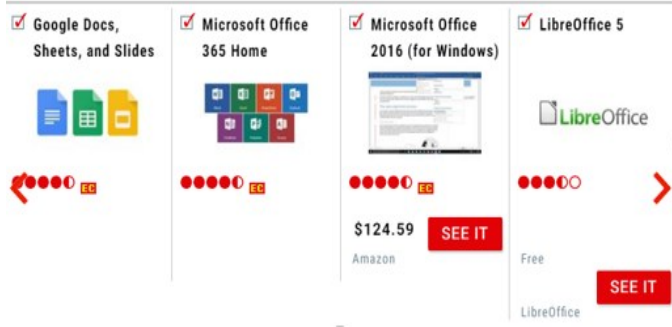


LibreOffice is a free and open source suite, a project of The Document Foundation. It was forked from OpenOffice.org in 2010, which was an open-sourced version of the earlier Star Office. The LibreOffice suite comprises of programs for word processing, the creation and editing of spreadsheets, slide shows, diagrams and drawings, working with data bases and composing mathematical formulae. It is available in 110 languages.



This suite is a powerful application. I suspect the software is used by hackers along with the LibreOffice Basic which is included with the suite. It seems a likely project. An example would be the text on this page. It could set up basic code and retrieve information counting paragraphs or collecting numbers from content and adding them for a total number.

But remember always Have fun using and playing with a Linux.



Mobile Computing SIG

By Ben Lochtenbergh Mobile Computing



Another Mobile Computing SIG meet went by in a flash it seemed. Attendance was ten.

Again, I had a number of folders with screenshots from my Nexus smartphone for the month. I take a screenshot if something happens that may be of interest to the group or myself. I distribute the screenshots by topic in different folders so we have topics to discuss. I talked in summary about all but opened only one folder to view the details. There just is not enough time in 90 minutes to do it all. Other topics were interesting enough to leave little room for all the screenshots, which we do at the end of the meeting. We will have new screenshots each meeting.

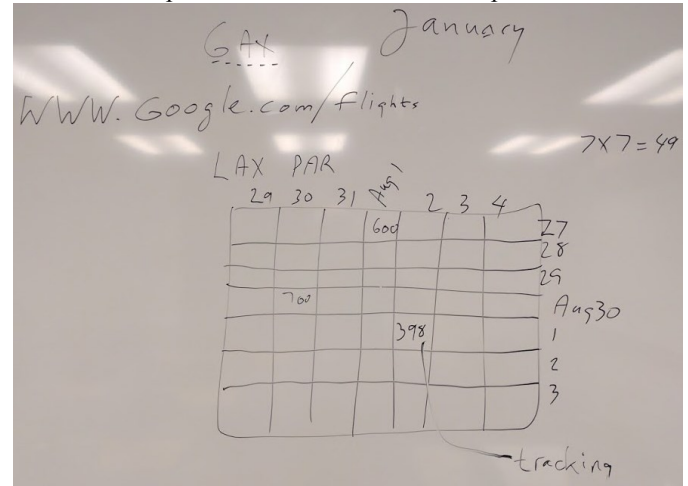
One special request was to discussing **how to back up contacts** to a thumb drive from iPhone, Android phones, and Windows machines. We will do that in August. The goal is to create spreadsheets that can be sorted and edited in Microsoft Excel. I did this a few years ago. I recall long Excel lists. I never got to transfer the data to Access to create and print nice reports. If there is enough interest, we can do that next month.

First thing we will do is see how many contact lists we have. I will use my situation as example. What devices do we want to consider? I can import all that in a WordPad spreadsheet free with Windows. Some members may not know this and others may find faults with WordPad. In my opinion, WordPad has 5% of Word's features and 50% of Word's functionality. That all an average person needs. Yes, it needs

more clicks to get something done but if you are, savvy and do not want to spend money for Microsoft Word this is a good alternative.

The next thing is to count how many contacts we have per list. Then we want to find duplicates in different lists. It seems like each source is associated with one or more email boxes/addresses. I fear I am already more serious about this then the software creators. In the SIG, we will see how far I got with this.

Whiteboard explanation about \$398 roundtrip tickets to Paris.



Do you know that Microsoft Word, Excel, and PowerPoint are free apps for small screen Android and Apple devices? Do you know 77% of Americans own smartphones? That is 240 million devices!

More Club Business

Main Meeting for August 6

August main meeting

Francis Chou of Irvine will present email. He has an impressive list of highly technical topics that he can present. He is part of the APCUG Speakers Bureau. He agreed to consider the fact that many of us have multiple devices, multiple email addresses, and too many emails. **He is encouraging** the attendees to come prepared with questions that can help learning about email, a major function in computing.

Main Meeting for September 10

September main meeting

Main Meeting suggestions are welcome at this time. Jim is in communications with Ivan Randall who can present Apple computers. Ben is in contact with Garry Sexton, a practicing medical doctor and president of the GSBUG computer club. He could give an Evidence-Based Medicine presentation.

July 2017 RAFFLE results

Winner names of drawings by Dennis Martin.

Membership Drawing, July 9, 2017	
Flashlight pen	Richard Miller
Three Outlet Power Strip	Bruce Jones
DVD+R Recording Discs	Dennis Martin
Ream of Paper	Bob Dickson
12 Gallon Tub	Don Armstrong
USB-2 Micro Card	Bob Strain

General Raffle Drawing, July 9, 2017	
12 Gallon Tub	John Szary
Three Outlet Power Strip	Martin La Roque
Ream of Paper	Jerry Resch
DVD+R Recording Discs	Jeffry Glassman
Flashlight Pen	Martin La Roque
USB-2 Micro Card	Ben Lochtenbergh

Dr. Don Armstrong volunteered to photograph the raffle winners. He suggested spreading them over different pages. Therefore, that is what we will do.



Dr. Don Armstrong with Tub

The August raffle prices are a surprise.



John Szary with Tub

Consignment Table

Consignment Leader Richard Miller

The NOCCC Consignment Table **will** be available in the lobby of Irvine Hall during the August 6, 2017 meeting.

The regulations are:

1. Only current members can place items for sale.
2. Non-members can purchase items.
3. The consignment table operates on a 90/10% basis - with the owner getting 90%, and the Club treasury 10%.
4. Fill out a Consignment Table User List and item tags for each item placed on the table for sale. The list is available on the NOCCC website.
5. Each tag must contain the seller's name, NOCCC membership number, an item name, description, and an asking price.
6. All items and money must be picked up no later than 1p.m. on the day of sale.
7. Any items and money not picked up will become the property of NOCCC and will be subject to disposal at the Club's discretion. The club has no storage room available for unsold items.
8. NOCCC is NOT RESPONSIBLE in any way for items bought or sold at the Consignment Table. Each item is sold on an AS-IS BASIS.
9. The consignment table and eWaste truck will be attended this August



E-waste Collection

E-Waste Leader Gerry Resch

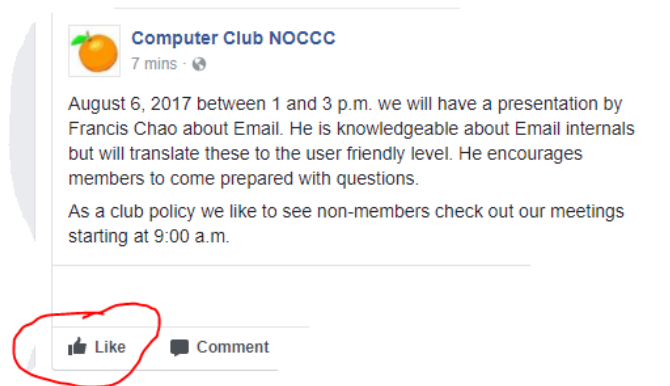


During the August 6, 2017 meetings, a truck shall collect electronic waste as usual. This happens every other month in the parking lot nearest our meeting places.

GPS directions: Orange, California 33.792, -117.85

Posted on Facebook

Facebook post by Ben Lochtenbergh



Like us at Facebook. Comments are welcome too.

Unused Space Fill

Space filler by Ben Lochtenbergh



Some SIGs did not report this month. To use this Orange Bytes space I hereby report another interest of mine. I have NOCCC in mind! You are looking at a photograph taken in the poolroom (billiards they call it) at the Irvine Senior Center. Notice TV on top. Notice pool cues and chair at the bottom. Why is this important? 1: I have trouble with Chromecast in Science 109. I tested it at another Wi-Fi that I cannot control closer to my home. I made it work! 2: I want to demo the Seniors my real World Championship Billiards 2017.

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**

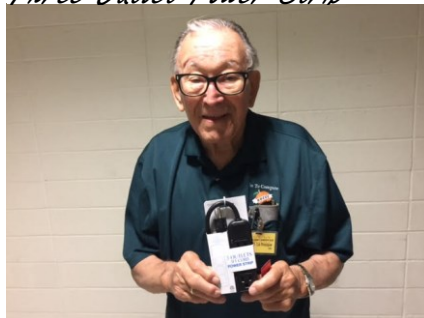
Mail to North Orange County Computer Club, PO Box 5841 Fullerton, CA 92838-0841
Or on Sunday hand completed form, with check if needed, to the Treasurer or a Board member.

Version 20161026



Richard Miller with Pen

*Martin La Roque with Pen and
Three Outlet Power Strip*



*Dennis Martin with
DVD-R Recording Discs*

*Raffle winning pictures
of Bruce Jones and
Jeffrey Glassman are
missing. So are the
names and pictures of
those who did not win a
prize July 9, 2017.*

North Orange County Computer Club
PO BOX 5841
Fullerton, CA 92838-0841

To All Members: Remember to read the line above your mailing address. It can show your DUE DATE or another message.

Dated Material – Please deliver by July 8, 2017

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 site



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

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.

- | | |
|---|--|
| <p>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.us about parking details, restrictions, and price break!</p> | <p>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 may cost you a parking ticket or tow away!</p> |
|---|--|