#### THE LOS ANGELES COMPUTER SOCIETY NEWSLETTER

**User** Friendly

#### Volume 40 Issue 5 May 2023

LACS A Computer and Technology User Group

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**NOTE:** Please refer to page 2 of this issue for an update on the new duespaying system and for the amount due for each category of membership in 2023.

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# MAY 9, 2023 GENERAL MEETING

MeetingTime: 7:00 to 9:00 PM — via Zoom Socializing and Questions & Answers: 6:30 Speaker: Mark Schulman, Board Member Central Florida Computer Society APCUG Speakers Bureau



Topic: Computers to the Moon

How did the United States manage to get humans to the moon in the 1960s when PCs didn't exist and computers were the size of a small warehouse? *Computers to the Moon* tells the story of computers aboard early U.S. space-craft, leading to the monumental and littleknown effort to create a computer capable of landing a spacecraft on the moon.

From our highly-technical society today, it's easy to look back half a century and believe that a real spacecraft computer was impossible. But the history of the pioneering Apollo Guidance Computer demonstrates that ingenious, motivated engineers and software developers, could accomplish amazing things, even half a century ago. In this talk, you'll learn what they created, how it worked, and how to get a glimpse of what a real moon landing looked like.

#### **Meet Our Presenter**

Mark Schulman has been a computer instructor, software designer, and small business owner. He did computer consulting for a number of major corporations, worked on large software development projects, and taught computer and programming courses. He has written or co-written seven computer books, all published by Que Corporation. Mark is now the IT manager for a group of family practice physicians and for a company that runs clinical drug trials. He lives in Central Florida, not far from the Kennedy Space Center and has been a space enthusiast all his life.

Tuesday, May 9, 7:00—9:00 PM Via Zoom 6:30—7:00: Socializing and informal Q & A LACS members on the PC groups.IO list will receive the Zoom link before or on **May 7**. Guests may ask for the link by emailing Leah Clark at LeahClark424 (at) gmail.com. before or on **May 7**.

More information about LACS is at <u>www.lacspc.org</u>.



# WELCOME TO LACS NEW AND RENEWING MEMBERS

Gavin Faught, LACS Treasurer

New Members (0)

Renewals (4)

Loling Beckman\*

Donna Benton

Howard Krivoy

Elliot Silverstein



\* Contributor

We wish a Happy Mother's Day for all LACS Mothers and Grandmothers. May your day be full of Blessings and Love.

APCUG EVENTS Watch your email forAPCUG workshops and other upcoming events.

There are good articles in the April issue of the *AARP Bulletin* on avoiding fraud in your home, on your phone, and on your computer. And there is an article on keeping your old computer running.

#### TO VISIT OTHER APCUG GROUPS OR TO READ THEIR NEWSLETTERS, SEE THE INSTRUCTIONS ON PAGE 9.

# **PAYING YOUR DUES IN 2023**

LACS is starting a system where all members will pay their annual dues at the same time, in December or January, for the coming year. Use the following chart to see the prorated amount you will owe in 2023. Select the month you are due, and select the membership level you wish to pay for to see your amount.

MEMBERSHIP LEVELS				SELECT THE MONTH YOU ARE RENEWING OR ARE JOINING LACS																		
	Yearly Rate	Monthly Rate	[	Dec.		Nov.		Oct.	Sept.		Aug.		July	J	une	May	April	N	larch	Feb.		Jan.
New/Renewal with Newsletter	\$40	\$3.33	\$	3.33	\$	6.67	\$	10.00	\$ 13.33	\$	16.67	\$	20.00	\$	23.33	\$ 26.67	\$ 30.00	\$	33.33	\$ 36.67	' \$	\$ 40.00
Associate	\$12	\$1	\$	1.00	\$	2.00	\$	3.00	\$ 4.00	\$	5.00	\$	6.00	\$	7.00	\$ 8.00	\$ 9.00	\$	10.00	\$ 11.00	) \$	\$ 12.00
Student	\$18	\$1.50	\$	1.50	\$	3.00	\$	4.50	\$ 6.00	\$	7.50	\$	9.00	\$	10.50	\$ 12.00	\$ 13.50	\$	15.00	\$ 16.50	) \$	\$ 18.00
New/Renewal with Electronic																						
Newsletter	\$30	\$2.50	\$	2.50	\$	5.00	\$	7.50	\$ 10.00	\$	12.50	\$	15.00	\$	17.50	\$ 20.00	\$ 22.50	\$	25.00	\$ 27.50	) \$	\$ 30.00
Gift membership	\$20	\$1.67	\$	1.67	\$	3.33	\$	5.00	\$ 6.67	\$	8.33	\$	10.00	\$	11.67	\$ 13.33	\$ 15.00	\$	16.67	\$ 18.33	\$	\$ 20.00
Contributor	\$50	\$4.17	\$	4.17	\$	8.33	\$	12.50	\$ 16.67	\$	20.83	\$	25.00	\$	29.17	\$ 33.33	\$ 37.50	\$	41.67	\$ 45.83	\$	\$ 50.00
Supporter	\$75	\$6.25	\$	6.25	\$	12.50	\$	18.75	\$ 25.00	\$	31.25	\$	37.50	\$	43.75	\$ 50.00	\$ 56.25	\$	62.50	\$ 68.75	j \$	\$ 75.00
Benefactor	\$100	\$8.33	\$	8.33	\$	16.67	\$	25.00	\$ 33.33	\$	41.67	\$	50.00	\$	58.33	\$ 66.67	\$ 75.00	\$	83.33	\$ 91.67	'\$	\$ 100.00

GENERAL MEETING REPORT April 11, 2023 By Leah Clark, LACS President/Editor Topic: What's Cooking? Home Automation in the Kitchen Speaker: Judy Taylour Apcug Speakers Bureau	You can control your appliances with Wi-Fi with a smart plug outlet extender. Designate which plug is for which appliance, and tell Alexa or Google what to turn off or on. Very convenient! If you have money laying around, here are a few things you can buy.
There has been a much increase in demand for smart home devices – numbers are in the billions. Judy has a lot of fun with this. With home automation and connecting your home to your Wi-Fi network everything can be con- trolled in real time, through a voice-controlled hub or a smartphone or tablet to make life easier and save time. Your home gets to know you and trains itself without the need for your	A <b>smart coffee maker</b> that's Wi-Fi enabled can cost \$150. It's programable to have coffee ready when you want it, and the strength and temperature you want it. Or you can get the <b>Spinn Wi-Fi Coffee Maker</b> for \$800! It's a bean-to-cup coffee maker that can make a single serving of espresso, Lungo, Americano, or a carafe of coffee. You can get a <b>Smarter Electric iKettle</b> for
input. Those who want to age in place need to set home automation in place. What do you want to accomplish for your kitchen – smart lights, appliances, gadgets,	<ul> <li>\$100, to choose your beverage and the temperature you want.</li> <li>The Ember Temperature Control Smart Mug is \$100, and it is app-controlled to set the tem-</li> </ul>
<ul> <li>and more? Make a plan and decide your</li> <li>budget and time frame.</li> <li>Which is better – Amazon Echo or Google Assistant? Google is more conversational. Alexa</li> <li>is more of a stickler for word sequences.</li> </ul>	perature of the drink of your choice. The <b>Bartesian Premium Cocktail and Mar-</b> <b>garita Machine for the Home Bar</b> costs \$370. It will create your favorite cocktail and cleans itself after each.
Google's search is more comprehensive, but Alexa beats Google in shopping-related ques- tions. Both let you group your devices into rooms in your home.	Judy then showed us a couple of things that aren't Wi-Fi but are useful or fun to use. The <b>Umbra Otto Automatic Soap Dispenser</b>
Cooking with Google Assistant	for \$45 is a touchless pump for the kitchen or bathroom.
Choose a recipe so Assistant can read the in- gredients and instructions. You can ask any questions. You can ask for your favorite music to be played, to turn on the oven, etc.	The <b>Uutensil Stirr Automatic Pan Stirrer</b> is \$37. It's battery operated, moves forward and backward, and speed is adjustable.
Cooking with Alexa and the Food Network	Use your voice to add items to the <b>Out of Milk</b>
Alexa can automate your gadgets, look up re- cipes, add items to your grocery list, stream tutorials, track calories, and more. Alexa can unlock live and on-demand cooking classes.	<b>Grocery Shopping List App</b> . It includes a shopping list, a pantry list, and a to-do list. The <b>Instant Pot Smart Wi-Fi 6 Quart</b> for \$135 includes pressure, slow, and rice cookers, a sauté pan, a steamer, and a warmer.
Smart Lightbulbs	For \$400, you can have a <b>Revolution Insta</b> -
Be sure to check the base fittings when buying smart bulbs. They are not all the same; some won't fit in your sockets.	<b>GLO<sup>™</sup> R189 Toaster</b> with 60 digital settings. The <b>Yummly Smart Thermometer</b> for \$80 is

# Page 4User Friendly — The Los Angeles Computer Society

Wi-Fi enabled and can be used with a Bar-B-Q grill, smoker, and air fryer.

The **COSORI Smart Wi-Fi Air Fryer** costs \$140. Use your voice to operate it from any room in your home.

The **GE Countertop Microwave Oven**, \$144, responds to your voice from any room.

A **GE Profile<sup>™</sup> 30-inch Electric Range,** a self-cleaning Wi-Fi convection oven, is \$1800.

At \$3,058, the **GE Profile<sup>TM</sup> 30-inch Gas Range** is a Wi-Fi electric convection oven with a gas cooktop.

The **GE Profile<sup>™</sup> Refrigerator** is \$3,200 and will even notify you if the door is left open.

Then you can buy a **GE Profile<sup>™</sup> Dishwasher** on sale for \$1,400. You can monitor cycle status, check rinse aid levels, and reorder detergent using your mobile device.

The **GE Water Softener** costs \$650. Use Wi-Fi to monitor water usage and receive a notice when salt levels are low.

Clean your kitchen with the **Wyze Robot Vacuum** for \$270. It maps your room and plans its path. The LIDAR sensor is a spinning laser on top of the vacuum to measure the distance to 2,061 points in the room to build a map. Your cat may like to ride on it!

The **GE Smart Washing Machine** is \$950, and the **GE Smart Electric Dryer** is \$1000.

Judy showed us the **Masterbuilt Bluetooth Digital Electric Smoker with Boiler** and the **Traeger Wood Pellet Grill.** 

Judy noted the problems with stand-alone Wi-Fi appliances that require multiple apps to control everything. You want to group as many things together as you can. Routers have built-in firewalls and are the key to your security. Reboot your router on a regular schedule.

This fun, interesting presentation was followed with questions, shared hints, and socializing. Listen to the Zoom recording of this meeting for details on items discussed. ❖

# LEDs (LIGHT EMITTIG DIODEs)

#### By Irv Hershman, LACS Director

Before diving into LEDs (light emitting diodes) here is a brief explanation of power.

The United States uses **AC** (alternating current) to power



our homes, businesses, etc. The current (in amps) periodically reverses direction. 120 volts (electric pressure) is used in the United States. Users get power in watts from wall outlets.

**DC** (direct current) is used in electronics. It goes in one direction only.

**Diodes** are electrical components that allow direct current to flow in one direction only but not the other. Diodes are made with a semi-conductor material, mostly silicon.

#### History

The history of lighting goes from the incandescent light bulbs that Thomas Alva Edison invented. In 1879 he made an incandescent bulb that was practical because it burned a long time.

By the 1950s incandescent bulbs still wasted about 90% in heat. The hunt was on for more efficient bulbs.

In 1962 Nick Holonyak, Jr. invented the first LED that produced visible red light when he worked at General Electric. He is known as the Father of the Light Emitting Diode.

In 1972, M. George Craford, when he worked at Monsanto, used one red and one green diode that produced a pale yellow light. He produced an LED that was 10 times brighter than Holonyak's. Monsanto was the first company to mass produce LED lights.

#### **Nobel Prizes for Physics**

Shuji Nakamura is a Japanese-born American engineer and inventor specializing in the field of semiconductor technology. He was a professor at the University of California at Santa Barbara. He is the inventor of the blue LED, a major breakthrough in lighting technology. Together with Akasaki Isamu and Amano Hiroshi, they won the 2014 Nobel Prize for Physics.

A few years ago I replaced the three bulbs in my bathroom above the sink. Before throwing them away I looked to see the wattage on each. It was 100 watts for each bulb. When lighted they were too hot to touch without burning my hands. So I replaced them with LEDs. Each one was 5.5 watts. When lighted they feel warm to the touch. Of course, there were several other incandescent bulbs in other rooms waiting to be changed.

One of the cartons of a well known brand contained four 60w replacement LEDs. On one side of the box was listed the following colors available like amber light, soft white light, bright white light, neutral white light, cool white light, and daylight. Each of them had a Kelvin designation which is a temperature scale that LED manufacturers use.

The box stated the brightness as 800 lumens for each LED. Lumens measure the quantity of light one is receiving from a bulb. The estimated energy cost is \$1.21 per year for each of the four bulbs. These are slated to last 10 years each.

What is interesting to me is that none of the boxes I saw had LED spelled out. Maybe in time that may change.

Like the smartphone, LEDs are slated to have a bright future. �



# **IS YOUR LIFE BORING?**

# Spice it Up By Becoming a Victim of Scammers and Thieves!

By **Kurt Jefferson**, Editor Central Kentucky Computer Society Reprinted from the CKCS Newsletter <u>https://ckcs.org</u> extown2@gmail.com

If you're bored to tears, why not put more excitement into your life by becoming a victim? Follow the tips below, and you're sure to find yourself quite busy as you try and dig yourself out of trouble. But at least you won't be bored!

Write your PIN on the back of your ATM and credit card! How else are you supposed to remember that vital number to tap into your finances?

Why waste time by shredding documents? Just toss those financial statements, online credit card notices you printed, and your retirement account papers into the green bin.

I mean, it's filled with cat litter, coffee grounds, tea bags, and yard trimmings.

Who would dig into your garbage to retrieve a few slimy documents?

Don't be stingy when someone using an unrecognizable phone number calls you and asks for a donation! Instead, make sure you open your heart by making sure the person on the other end has correctly typed your credit card number. It's a good cause, and you're helping out in a big way. I mean, doesn't it feel good to share your credit card number with the \$20,000 account limit to a charity you've never heard of before? Sure! You're a big sweetheart.

Why in the world would you waste your time by bothering to monitor your banking account on line? Jeeze. The sun is shining. Go outside and have fun! No need to bother yourself with numbers on a website or an app. Even though there might be a few purchases you can't identify. Heck—it's no big deal! No reason to contact the bank and speak to that helpful customer service rep that you cannot understand, anyway.

Sarcasm is a powerful tool to get across a message. We've been using it throughout this article to get your attention. Now that you're reading this — What's currently the leading cause of financial loss by fraud? Romance scams! There's big money being lost here by thieves targeting the lonely.

In 2020, more Americans of all ages lost more money through romance scams than any other means. Wow! That is a eye-opener! Talk about the way to rob someone in the 21st century. In 2020, victims of romance scams lost \$304 million — and people 70 and older had more money stolen that way — on average, \$9475 — than any other age group. Whew!

Here's how it is done. First, the scammer creates a fake profile on social media or dating sites and tries to start a relationship through texting or chatting. Romance scammers usually make one excuse after another why they cannot meet their victim, um, "loved one," in person.

For example, romance scammers often ask their "loved ones" for money by requesting gift cards. But, instead they never share their real photos, opting for fake headshots cropped from Insragram, Facebook, or even models displayed on websites.

> Don't be gullible. Don't become a victim. Be smart. Be aware. Be vigilant.



# THE BLUE LIGHT FALACY?

By **Frank Fota**, Editor Fredericksburg Monthly Notes Fredericksburg Personal Computer Users Group, VA https://fpcug.org

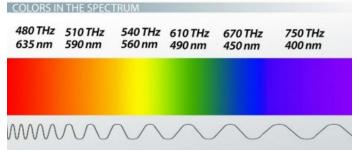
I recently purchased new eyeglasses and I was offered blue light filtering. The technologist asked if I spend a lot of time viewing screens. I replied that I spend most of my time in front of computers, phones, and television screens. It is thought that blue light interferes with your sleep because exposure slows the secretion of melatonin, a hormone

that helps us sleep. Therefore, I gladly purchased the blue light filtering. However, I wish I had read Joe Fedewa's article in How -To Geek,



"Blue Light Is Not as Bad as You Think" before I paid for lenses with a blue light filter coating. I could have saved \$50.

How is blue light different from other colors? Blue light has a shorter wavelength than other colors of the visible spectrum. The shorter the wavelength; the higher the energy or penetrating power.



Our eyes cannot effectively filter out blue light and we are exposed to lots of it. Blue light filtering for eyeglass lenses is simply a colorcoating that is transparent for most colors but nearly opaque for blue light.

We know that exposure to blue light can reduce melatonin levels. We also know from personal experience that blue light can be harsh. Have you noticed (i.e., being blinded by) the blue tint of modern car headlights or picked up your phone from a sound sleep in a dark room?

Recent studies of blue light effects show no evidence of eye damage or eye strain. The American Academy of Ophthalmology (AAO) reports, "There is no scientific evidence that the light coming from computer screens is damaging to the eyes. Because of this, the Academy does not recommend any special eyewear for computer use."

So what about the effect that blue light has on melatonin production? A 2019 study in Chronobiology International states that "Melatonin levels remained maximally suppressed for about 15 min after cessation of the exposure and thereafter recovered in about 15 min." The blue light filtering myth will be hard to dispel. Both brick-and-mortar and online stores sell dozens of brands of glasses that praise the benefits of blue lightblocking and warn of the harm that blue light exposure may cause.

According to the AAO, the best advice regarding eye strain is to "Take regular breaks using the **20-20-20** rule: Every 20 minutes, shift your eyes to look at an object at least 20 feet away, for at least 20 seconds." All wavelengths of visible light can affect melatonin levels. However, blue light is especially good

at suppressing melatonin production. For a better night's sleep, remove blue light and other light sources from your bedroom. �



WINDOWS AND ANDROID TIPS Here are links to some helpful tips taken from the APCUG website. https://apcug2.org.

#### How To Back Up a Machine That Won't Boot

You need to boot to back up, but you can't boot. What then? Here's the scenario: all is well and you're getting lots of work done on your computer when all of a sudden, it crashes. No idea why — it just crashes. What's worse, it won't reboot. Maybe it just hangs on boot, maybe it says the drive isn't found, or maybe there's something else interfering. To make matters worse yet, you stand to lose all that work you were doing because it hasn't yet been backed up. Your most recent work seems to be locked inside a hard drive you can't access. There may be a way to back it up before dealing with the crash. Learn how...

How to Back Up a Machine That Won't Boot <u>– Ask Leo!</u>

# Windows 11 Now Has Camera Options in the Quick Settings

As videoconferencing apps keep becoming more common, you need to keep your computer's camera feed looking sharp. Now, you can quickly change your camera's settings with a new, handy toggle on Windows 11. Read more... <u>Windows 11 Now Has</u> <u>Camera Options in the Quick Settings</u> (howtogeek.com)

# Spec Showdown: the Original IBM 5150 vs. Today's PCs

Just for kicks, let's compare the specs of the 1981-vintage computer that inspired the birth of PC Magazine to some modern-day desktops. <u>Spec Showdown: The Original</u> <u>IBM 5150 vs. Today's PCs | PCMag</u>

# LACS INFORMATION

# PAY DUES BY PAYPAL OR ZELLE

To pay by PayPal, go to this link: www.paypal.com/paypalme/00001024 and then click on Send. You'll be asked to log in to your PayPal account or sign up for an account so that PayPal will know where to get the money to send. Follow the prompts. Once you have entered your dues amount, click on Add a note. Tell us of any updated information: physical address, email address, phone number, and what type of dues you are paying: regular, electronic User Friendly, etc. or if you don't want your contact information published in the roster.

**To pay by Zelle**, log into your bank with your username and password.

Select Transfer Money > Send Money with Zelle. Follow the instructions. The name of the recipient is Los Angeles Computer Society. Select Send by email. The email address is:

**lacomputersociety@gmail.com**. The wording may be a little different on your bank's site. Email questions to Gavin at gmfaught@gmail.com.

# HOW TO JOIN LACS'S MAIL LIST

LACS now has **one** active general list: <u>PC@LACS.Groups.IO</u>. Use this email address to ask questions, to offer any comments or suggestions, and to conduct official LACS business.

New LACS members should receive an invitation to join our list with two weeks to accept. LACS members who want to join the list should send an email to

LACS+subscribe@Groups.IO from the email address they want to use with their name and phone number. Stephanie, our Groups.IO Coordinator, will check your membership and add you to the PC list. You can contact her at nordlacs@AOL.com

#### FIX YOUR PC FOR FREE?

LACS member and presenter, **Jim McKnight**, has an open



offer to LACS members to diagnose, repair, disinfect, or upgrade members' PC's for free. There are certain limitations to Jim's offer, so see the details by clicking the "Fix my PC for Free?" link at <u>www.jimopi.net</u>.

Non-members can wisely invest in a oneyear <u>new regular</u> LACS membership (\$40.00), and Jim will fix your PC problem, too. Contact Jim for specific considerations.

# HOW TO CHANGE YOUR CONTACT INFORMATION

Go to <u>www.lacspc.org</u>. Click on **Member** Forms in the bar under the picture. Under **Membership Update**, select **Click Here** to select either the DOC or PDF form. Fill it out, and email it with your changes to or snailmail it to Membership@lacspc.org

> Los Angeles Computer Society 11664 National Blvd. #343 Los Angeles, CA 90064-3802.

# ATTENDING A ZOOM MEETING

LACS members who are on our PC email list will receive a link, meeting ID, Passcode, and instructions to attend the LACS general meetings a couple of days before the meeting. **Please let Leah Clark know by the morning of the meeting if you don't have it or have any problem.** 

# You can put an icon to the link on your desktop so it's handy at meeting time.

- 1. Right-click a blank spot on your desktop.
- 2. Select **New** from the drop-down menu.
- 3. Select Shortcut.
- Type or copy and paste the link in the box that says "Type the location of the item."
- 5. Click Next.
- 6. Type a name for the shortcut.

# LACS CALENDAR



#### LACS Board Meeting

Date: Monday, May 1, 2023 Time: 7:00 P.M. (Open from 6:30 P.M.) Place: Wherever you are via Zoom Please log in early so we can start on time.

#### LACS General Meeting

**Date:** May 9, 2023 via Zoom **Time:** 7:00 P. M. (Open from 6:30 P.M.) **Place:** Wherever you are via Zoom Please log in early so we can start on time.

May 1:LACS Board MeetingMay 1:May DayMay 9:LACS General MeetingMay 14:Mother's DayMay 20:Armed Forces DayMay 29:Memorial Day



#### VISIT OTHER COMPUTER USER GROUPS AND SEE THEIR NEWSLETTERS

Many APCUG groups allow members of other groups to attend their meetings. LACS heartedly welcomes visitors from other user groups, and we are welcome to join other group's meetings.

Go to <u>www.APCUG2.org</u> . Click on **Member Benefits**, then on **Groups Sharing Meetings** or on **Newsletters Online**. A list of groups sharing meetings is arranged by time zones.

# **UPCOMING MEETINGS/EVENTS**

June 13: TBA

Check your email and User Friendly for updates to this schedule.

#### **ZOOM MEETINGS**

Members on our PC email list will receive, via email, an invitation to join LACS Zoom general meetings. Click on the URL in the invitation before the meeting and follow the prompts. Contact Leah Clark at leahjc@sbcglobal.net if you have any questions or if you don't

if you have any questions or if you don't receive the link by the morning of the meeting day.

#### **ZOOM RECORDINGS**

LACS members will receive links to the recordings of Zoom meetings via email.

#### **HYPERLINKS**

Underlined text (blue in the colored editions) in User Friendly usually means it's a hyperlink to a website. Copy and paste it into your browser's search or into your address bar. Or click on the link on the online version to see the referenced place.

#### USER FRIENDLY BACK ISSUES AND INDEXES

To see back issues of *User Friendly*, go to <u>http://www.lacspc.org/category/user-friendly/</u>.

For indexes to past issues, go to <u>https://www.lacspc.org/category/uf-index/</u>

To find a specific article or topic, use the search box on the top right.

May 9: Computers to the Moon By Mark Schulman

# **MEMBERS HELPING MEMBERS**

LACS members volunteer to help other members solve hardware and software problems by telephone or during the hours listed below. Select the topic from the list and then contact a person whose number is listed next to it.

**Find a helper's email address and phone number on your roster**. If you don't have your roster, call 424-261-6251. Only members in good standing may receive a roster. We hope you find this LACS free service useful.

If you are experienced using a particular program or hardware, please volunteer to be a consultant. You don't have to be an expert. To volunteer for this list or to make corrections, please email Leah Clark at <u>leahjc@sbcglobal.net</u> or call her at 424-261-6251.

Adobe Creative Suite: PDF,	Hardware - 7	Photoshop - 10
InDesign, Photoshop, etc 10	Lotus Word Pro, Approach - 7	Quicken - 8, 12
Android Smartphones - 8	Mozilla Firefox - 7	Thunderbird - 7
Apple devices - 11	MS Excel - 8, 11, 12	Utilities - 7, 8
Anti Malware and Backup - 7, 8	MS Word - 1, 3, 8, 12	Visual Basic - 5
Dragon Naturally Speaking - 3	MS Outlook - 8, 1, 10	Websites - 5
Genealogy - 8	MS PowerPoint - 8, 11	Windows - 7, 8
Groups.IO - 8	MS Publisher - 2	WordPerfect - 8
	PDF 24 - 8	Zoom - 2, 9

		Preferred Time	for Phone Calls
Number	Name	From	То
1	Beckman, Loling	10:00 AM	6:00 PM
2	Clark, Leah	7:00 AM	5:00 PM
3	Hershman, Irv	11:00 AM	11:00 PM
5	lalongo, Gilbert	9:00 AM	5:00 PM
7	McKnight, Jim	8:00 AM	7:00 PM
8	Nordlinger, Stephanie	9:00 AM	5:00 PM
9	Presky, Mark	Any	Any
10	Rozek, E. J.	Noon	8:00 PM
11	Van Berkom, Paula	9:00 AM	5:00 PM
12	Wilder, Joan	9:00 AM	9:00 PM

Note: Times are Pacific Times

# **OFFICERS, DIRECTORS AND LEADERS**

TITLE	NAME	TERM
President	Leah Clark	2023
Vice President	Stephanie Nordlinger	2023
Secretary	Marcia Jacobs	2023
Treasurer	Gavin Faught	2023
Director	Sylvia Davis	2023
Director	Howard Krivoy	2023
Director	Mark Presky	2023
Director	Irv Hershman	2024
Director	Emil Rozek	2024
Director	Annette Tossounian	2024
Director	Paula Van Berkom	2024
Immediate Past President	Stanley Johnson	
APCUG Representative	Leah Clark	
Corporate Counsel	Stephanie Nordlinger	
Database Manager	Donna Benton	
Groups.IO Email Lists	Stephanie Nordlinger	
Newsletter Editor	Leah Clark	
Program Chair	Stephanie Nordlinger	
Publicity – Press	Mark Presky	
Publicity – Online Media	Open	
Quick Consultants	Leah Clark	
Webmaster	Paula Van Berkom	

Mailing Address: 11664 National Blvd., #343, Los Angeles, CA 90064-3802 Website: <u>www.lacspc.org</u>

**Contact the President/Editor at 424-261-6251**. Follow the prompts. This is a Google Voice number.

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# INTRO TO IP ADDRESSES AND PORT NUMBERS

#### By John Krout

Potomac Area Technology and Computer Society, VA <u>www.patacs.org</u>



The foundation for any app or device that communicates

with other computers is an IP address and port number. Learn how that works.

# Introduction

These days, much of what we all use computers to do is based on communication with other computers through a network. Email, web browsing, and streaming video are three examples. All of that communication is based on **Internet Protocol** (IP) addresses, and a related concept called **port numbers**. This article will explain those concepts and how the device which provides your home Wi-Fi, called a **router**, plays a critical role in digital network communication.

# The USPS Analogy

Every computer, smartphone, and tablet (hereafter referred to as "device") has an IP address when connected to a network. Delivery services such as the US Postal Service can deliver mail and packages because packages are labeled with a street address. The IP address assigned to your device serves the same purpose: digital info for your device is delivered fast and accurately because it is labeled with your device's IP address. Your router automatically assigns the IP addresses on your network; you don't need to put in a request. Think of your router as your local post office, and each of your devices as a building served by that particular post office, as depicted in illustration 1 to the right.

One difference between the USPS and your network is that your device has to ask for digital info. You use an email application or a web page to request email, and then the new



Illustration 1

emails are delivered to your device from a computer acting as an email server.

# Domain Name Service or System (DNS)

Another external server, called a Domain Name Server (DNS), helps in a big way: it converts the domain portion of the recipient address, such as @yahoo.com or @nasa.gov, to an equivalent IP address. Using that IP address, other computers can relay your request to the destination, and send the reply to your device. You need to know only the name, and not the IP address, of the server you contact. Over time, the destination IP address for a familiar domain name might change, but the information on the DNS stays up to date and allows you to use a familiar domain name instead of a changed IP address.

# What Does an IP Address Look Like?

Inside your device, all data are numeric. A byte is simply a number with a collective value in the range of 0 to 255. Combining bytes in creative ways lets us write emails, take and share photos, display web pages, and so forth.

Likewise, an IP address is a number, composed of four bytes. An IP address is expressed like this: 192.168.1.42. Each byte in the address is separated from the next by a period. See **illustration 2** on page 13.





# How To See Your Device IP Address Android 12

Open the **Settings app**, choose **About Phone**, and then choose **Status Information**. Look under the heading **IP address**. You can see an example of that screen captured on a Samsung Galaxy S10 in **illustration 2** with the IP address circled.

# iOS 15 (Apple)

Open the Settings app, and choose Wi-Fi. Just below the Wi-Fi switch, you will see your Wi-Fi network name, with some gadgets to the right. Tap the info button (it's a lower case "i" inside a circle) to the right of the name of your Wi-Fi network. A new screen appears. Scroll down and find the **IPv4 address heading**. Below that, you will see both your device's IP address and the internal IP address of your router. See the example to the right, **illustration 3**, with the IP address circled.

#### Windows 10

Open the **Settings** application, choose **Network & Internet**, and click the **Properties** button in the right-hand pane. A new screen appears; scroll to the bottom and find the **IPv4 DNS Servers**.

You can see an example in illustration 4 below. The IP address is circled. The router's internal IP address is immediately below, on the line marked IPv4 DNS Servers.

IP settings	
IP assignment: Edit	Automatic (DHCP)
Properties	
Link speed (Receive/Transmit):	1000/1000 (Mbps)
Link-local IPv6 address:	fe80::2daf;7c4f:6ae6:2bde%19
IPv4 address:	192.168.1.232
IPv4 DNS servers:	192.168.1.1
Primary DNS suffix:	verizon.net
DNS suffix search list:	verizon.net
Manufacturer:	Intel
Description:	Intel(R) Ethernet Connection (7) I219-V
Driver version:	12.19.0.16
Physical address (MAC):	70-85-C2-BD-E1-5C
Сору	



#### **Port Numbers**

As you know from experience, your device can communicate with many other computers simultaneously. For instance, your device can run an email client application, a web browser, and a video streaming application concurrently. Your device uses a second concept called **port numbers** to properly deliver incoming digital info to the correct application on your device. Ports are analogous to apartments within an apartment building. Each apartment has its number. Physical deliveries are directed to the correct apartment by being labeled with the correct apartment house address and apartment number.

Think of your device's applications as apartments. Each uses a port devoted to the purpose of the application. The ports are numbered, the number range is 0 through 65535, so there are 65,536 ports. Obviously, they are virtual ports, not physical.

Some of the port numbers are, by internet convention, dedicated to specific purposes. Some port numbers are devoted to email, some are for web browsing, etc.

The port numbers in the range of 0 to 1023 are called **well-known port numbers** because those are pre-assigned to specific purposes such as email or web browsing. I reviewed a Wikipedia page listing all of the pre-assigned port numbers. There are many devoted to purposes and applications I have never heard of and many I use every day. Port numbers greater than 1023 can be used for any purpose, and are called **ephemeral ports**.

Some web page addresses include both a name and a port number. You may have accessed a web page expressed like this:

https://www.anyserver.com:8080 (not a real URL)

The number after the colon, 8080, is a port number. It is within the range called

ephemeral ports. Using an ephemeral port number as part of the address allows web servers to host many different home pages, and each home page is assigned a different port number.

#### **Your Router**

Your router does a lot more than simply send and receive Wi-Fi radio signals. Overall, it serves as the city name in which various apartment buildings exist. The total possible number of IP addresses (using IPv4) is close to 4 billion. That sounds like a lot, but, in most city areas of the world, there are more devices than people, by a large margin.

Long ago, the internet developed a solution. That solution is built into your router, the device that provides your home Wi-Fi. The router has two responsibilities. First, it assigns IP addresses to itself and your devices, in one of two ranges of reserved IP addresses, either 192.168.#.# or 10.#.#.#. The router's self -assigned address is called the **internal IP address**. Second, the router acts as your connection to the internet, and as such, the router is assigned an **external IP address** by your internet service provider (ISP), such as Cox, Comcast, Fios, Frontier, etc.

Like a central post office, a router forwards every digital info request from your device to the destination. From the viewpoint of the outside world, the only destination address for responses to your requests is the **external IP** address of the router. When the corresponding digital response arrives at the router, the router forwards the response to your device.

The local address of the router enables your devices to send digital information requests to and through your router because each computer is connected to the router by Wi-Fi or ethernet cable and each smartphone or tablet is connected by Wi-Fi.

What this means in practice is that a large number of routers can assign the same range

#### May 2023 User Friendly — The Los Angeles Computer Society

of **IP addresses** to connected devices. Your neighbor's router can, by chance, assign the same IP address to your neighbor's phone that your router assigns to your phone. The neighbor's router serves a different "city" and has a different external IP address than your router has, so servers on the internet can direct responses to the correct router.

My own router's external IP address, assigned by my ISP, begins with 96. That is not necessarily a permanent IP address assignment. Each assignment of an IP address by an ISP to a router has a fixed duration, called a **lease**. A lease typically expires in 24 hours. Then the lease is renewed by the ISP. However, my router's external IP address has not changed in many months. The bottom line: routers and reserved IP address ranges make it possible to connect many more than 4 billion devices to the internet, at the "cost" of one IP address per router. My router serves 9 or more devices most days and more when I have visitors.

When your smartphone is out of range of your Wi-Fi or is disconnected from your Wi-Fi, then it connects to the cell network or another Wi-Fi if you are in range. At that point, the IP address of your phone is assigned by the network to which it has connected, and is not necessarily the same IP address your device was assigned on your Wi-Fi. For example, on my Wi-Fi, on the day I wrote this article, the IP address assigned to my smartphone by my router was 192.168.1.40. When I disconnected my smartphone from my Wi-Fi at home, the IP address assigned to my smartphone by the cell network was 100.87.129.39. Effectively I have moved my smartphone to a different "city".

How can you receive email when your device's IP address changes? Your device sends your email account name and password to the email server when you use an email application or a web page to check for email. The current IP address is simply the address to which the email server must send its response. �

# **MOST WISHED-FOR NEW TECH**

By **Greg Skalka**, President Under the Computer Hood User Group <u>www.uchug.org</u> president (at) uchug.org

We seem to have so much technology in our lives - how could we want more? But, I'm writing this on President's Day, and I wonder, if George Washington could be transported in time to today, would he be able to cope in our world? Beyond the social and economic changes he would face, would he be able to deal with our technology? Cars, trains, airplanes, radio, TV, cell phones, space travel, nuclear bombs - would he be able to understand any of it, or would he want to hide up in a cherry tree? There is a saying: Any sufficiently advanced technology is indistinguishable from magic.

If we were able to bring Abe Lincoln to the present day, would he be any better able to understand our world? He would have at least some familiarity with trains and some industrial technology. Since he used the telegraph, he may be better able to cope with our communications tech today.

What if we could bring Albert Einstein (who died in 1955) to the present? Would he be astounded by the capabilities of a smartphone?

What new technology would you most like to see introduced this year? This was a question a web app asked my friend's wife. Because she currently has two retirement homes, one in Idaho and one in Arizona, she said what she wanted most was a transporter. No matter how much tech we have, we still have science fiction, which can drive our desires for more and direct our innovation. For example, everyone has seen Star Trek and its transporter device, a means to "beam" people and materials from one place to another in almost an instant. My friend and his wife have traveled between their homes many times in the last year, so it was understandable that she would like a way to make that trip more quickly.

The Star Trek transporter is generally portrayed as a circular pad connected to a device or console on the floor. A person on the pad is scanned atomically and then dematerialized, with the data representing their physical manifestation sent to a remote location and re-materialized. Matter, to energy, and back to matter. That seems like it could be in the realm of science and not magic, at least for non-living things.

If we can have a 3D printer today using elemental materials, who is to say we couldn't one day print in atomic particles, creating atoms and molecules of any kind? That is likely the science behind the Star Trek replicator, the cousin of the transporter. It can create inanimate objects of great complexity from a data file, with energy as the only apparent input.

From "tea, Earl Grey, hot" to complex parts, the replicator could help feed our world and solve many problems, as long as you could solve the problem of where to plug it in. Of course, Star Trek tech would have to include a powerful green power source like a fusion reactor.

We are starting to take some steps toward the food replicator concept. For example, I've read about a company trying to "grow" animal tissue that can be 3D printed into burgers or steaks. This would provide "cruelty-free" meat that perhaps requires fewer resources than our current agricultural methods.

The Star Trek replicator only made food and parts; it seemed incapable of creating a living object, making it more plausible. Many people, myself included, have concerns about the apparent "destroy, then re-create" operation of the transporter in Star Trek. There were a few episodes in which a character's information was trapped in the device's "pattern buffer" (presumably memory) for years or decades before someone found a way to re-materialize them. In one episode, a transporter malfunction created a second instance of a character. This would have obvious religious implications in the real world, but apparently not in Star Trek.

My preference for quick and distant travel would be by stargate, from the movie "Stargate" and its derivative TV series. In this sci-fi franchise, stargates are devices created by ancient aliens that can connect with a wormhole (a "tunnel" through spacetime). Anything passing into a connected stargate instantly passes through the wormhole and out the stargate at the other end. These seem more supported by science than transporters; now, we need to find those aliens to show us how to build them. Perhaps those aliens in the movie "Contact" could help. If only they'd send us the plans.

My favorite "wish-for" tech device is something I've not specifically seen in any science fiction: the temporal cakebox. My concoction solves one of my most vexing problems: how to fully enjoy my favorite food chocolate cake. We live in a time of food plenty, with a nice chocolate cake available at Costco for a good price. I'm too thrifty to want to pay for cake by the slice, but I can't (and should not) consume a whole cake in the time before it degrades.

So what I need is a temporal cakebox. I envision the temporal cakebox as a device similar to a large microwave oven. When you buy a cake, you would take a slice, put the remaining cake in the temporal cakebox, close the door and activate it by pressing the Reset button. Later (hopefully at least a day or two), you can return to the temporal cakebox and press the Return button. This would return the inside of the device to the time when you last pressed the Reset button. Then, you could open the cakebox door, remove another slice (just as fresh as

Page 17

when you put the cake in), close the door, and press Reset again. This sequence can be repeated until the cake is gone, with the last slice being just as good as the first.

Since I'm not violating any laws on the conservation of matter (I'm not creating any cake, just doling it out over spacetime) or making any time travel paradoxes (no cake is going back in time to kill my grandfather), I don't see why the temporal cakebox can't work.

The stereotypically expected technology always involves a flying car. Don't you remember thinking as a child that we would have flying cars by the 21st century? We are almost a quarter of the way through it, and still no flying cars. I can't see that we could have flying cars for the masses unless they were self-flying. Since we can't seem to perfect self-driving in two dimensions, flying cars seem like a long way off.

Another slightly related tech item is the personal jetpack. Those appear to be available (as well as wingsuits), though they are relatively expensive, in the \$250k to \$500k range.

Finally, the personal drone is affordable, though I've yet to see any Amazon delivery drones in my neighborhood. Al, or artificial intelligence, is being worked on today. It may one day drive our cars, fly our planes, find a solution for global warming or rule us as a benevolent overlord. Right now, all an AI can do is win at Jeopardy and predict what we will buy next. It has been eleven years since the IBM Watson computer beat Ken Jennings on Jeopardy; what has it been doing since then? At least Watson is not trying to invade Ukraine. Or is it? See the article "Watson Sold Off for Parts" at How IBM's Watson went from the future of health care to sold off for parts. (slate.com) If AI could be made safe and effective, a use for it would be as a robot helper. Having a few droids around the house to help out would be great. Oh, wait! My wife has a Roomba robot vacuum, though she hardly uses it. So, I guess it is no R2-D2 or C-3PO. \*

Windows and Android Tips Continued from page 7

#### NortonLifeLock Merges WITH Avast To Form a New Company Called "Gen."

NortonLifeLock has settled on a new company name after merging with antivirus provider Avast two months ago: Gen. The full name is actually Gen Digital. But the company is already promoting itself as Gen through marketing materials and on its website. The term doesn't exactly connote cybersecurity or antivirus. However, the newly merged company selected the name to underscore its focus on protecting "digital life." "We're all a part of a new generation, regardless of age. It's not Gen X, Y or Z, it's Generation Digital," says CEO Vincent Pilette, who was previously the head of NortonLifeLock. But despite the new name, all the separate brands will continue to live on. "Yes, nothing will change on that front. The company name and logo change won't impact their consumer brands," a spokesperson for Gen told PCMag.

NortonLifeLock Merges With Avast to Form New Company Called 'Gen' | PCMag

#### 5 Common Smartphone Security Myths, Debunked

Virtually everyone has a smartphone, but that doesn't mean they understand the security in place on devices. Here's the truth about mobile security. <u>5 Common</u> <u>Smartphone Security Myths, Debunked</u> (makeuseof.com)

#### 8 Ways To Stop Your Laptop from Murdering Your Back

Use these tips to skip the neck and back pain. <u>8 Ways to Stop Your Laptop From</u> <u>Murdering Your Back (howtogeek.com)</u>

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For learning how to use internet-based web-	COMPUTER FUNNIES
<ul> <li>sites and applications for free.</li> <li><u>https://TechBoomers.com</u></li> <li><u>https://www.youtube.com/watch?v=O2-</u> bwYIYu1I</li> </ul>	<ul> <li>The biggest joke on mankind is that com- puters have begun asking humans to prove they aren't a robot.</li> </ul>
SPECIAL OFFERS Go to the APCUG website https://	<ul> <li>Just once I want a username and pass- word prompt to say CLOSE ENOUGH.</li> </ul>
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and Acronis True Image, and several book, media and training sites offer discounts in- cluding the two mentioned below.	<ul> <li>Last night the internet stopped working so I spent a few hours with my family. They seem like good people.</li> </ul>
<ul> <li>Members can save at the Pearson Technology websites: InformIT, Cisco Press, Pearson IT Certifi- cation, Que Publishing, Adobe Press, and Peachpit Press. Informit.com/user_groups/index.aspx</li> </ul>	• For those of you that don't want Alexa listening in on your conversation, they are making a male version — it doesn't listen to anything.
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Name: First	Last					
Name of Associate: First (Same address as primary member)	Last					
Address:						
City, State, Zip + 4						
E-mail Address:	E-mail of Associ	ate				
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# Los Angeles Computer Society

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Before each meeting, members and invited guests will receive an email with the URL link to the meeting. If you haven't received it by the morning of the meeting, let Leah Clark know. When you click on the link, you will enter a waiting room. Then the host or a co-host will admit you to the meeting.

Please try to arrive at least a few minutes before the meeting starttime so you don't interrupt the meeting and any technical problems can be solved. If you need to take a break during a meeting, do not click on Leave or End. If you do, the meeting will be interrupted for someone to re-admit you from the waiting room. You may turn off your video when you are gone.