

User Friendly

LACS
A Computer and
Technology
User Group

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LACS NEEDS YOU

- Candidates are needed for LACS board positions.
- Nominations at the October 13 general meeting.
- Voting will take place if no positions are contested.

LACS IS A MEMBER OF APCUG

www.apcug2.org
www.facebook.com/APCUG
www.twitter.com/apcug
www.youtube.com/apcugvideos



An International
Association of Technology
and Computer User Groups

OCTOBER 13 GENERAL MEETING

MEETING TIME: 7:30 – 9 PM – Via Zoom

6:30 to 7:30: Socializing and Question & Answers

Topic: Cybersecurity and Understanding Resilience

Speaker: Joseph Oregon, Cybersecurity Advisor

The ability to recover from difficulties in our lives varies from our routine personal everyday tasks to those tasks we encounter in our workspace environments. As the advancements in technology have exponentially increased, so has the ability of adversaries to exploit those technologies.



- Are we doing enough to protect ourselves?
- Are we positioned to recover effectively?
- Are we winning or losing the cyberwars?

Working from Laguna Niguel, he supports the Department of Homeland Security (DHS) mission of strengthening the nation's critical infrastructure's security and resilience. His program coordinates cyber preparedness, risk mitigation, and incident response. It also provides cybersecurity resources, including assessments, to the nation's sixteen critical infrastructure sectors and to state, local, tribal, and territorial governments. He will discuss cyber and physical risks, and resiliency at the federal level.

Meet Our Presenter

Joseph Oregon serves as the Cybersecurity Advisor, Region IX (California), for the Cybersecurity Division (CSD), Cybersecurity and Infrastructure Security Agency (CISA), which is part of the U.S. Department of Homeland Security. Mr. Oregon is a U.S. Army Veteran, and he has spent 22+ years in the Department of Defense and Information Technology / Information Security communities.

Tuesday, October 13, 7:30 - 9:00 PM

This meeting will be conducted via Zoom

6:30 - 7:30 Social Time and informal Q & A

More info: www.lacspc.org or 310-398-0366

FROM YOUR PRESIDENT / EDITOR**A Wish for You**

We wish you continuing health and joy of life, and when happiness comes through your door, make sure it's wearing a mask!

Join the LACS Board

At the October 13 general meeting, you will have the opportunity to nominate members, including yourself, for the 2021 LACS board. If there are no contested positions, we will have an election at the meeting. If any Office is contested, you will receive a mail-in ballot.

Nimrod's Message

Editor: Cat Mews
AKA John Driscoll's cat
He's the President of The Central New York Technology User Group
Salt Bytes, April 2020

Oh, now he tells me cats don't get COVID-19. Do you know how hard it is to get a mask that fits me? And this "paw" washing .. you know cats don't like water anyway. And, guess what, how do you think they take a cat's temperature. It was bad enough using John's thermometer.

Can't say too much more though, I do get fed regularly, and the stores don't seem to have a "run" on "Sheba" kitty delight cat treats. Oh yea, kitties don't use litter box "paper" either.

I have to say one thing. Sometimes it's nice to just cuddle up and take advantage of the amount of heat our humans radiate. And, you know, things get cleaned up a lot more. John's been down in the basement quite often doing loads of wash.

October is National Cyber Security Awareness Month

LACS is enrolled as an NCSAM Champion, so we can access resources, tool kits, and tip sheets for keeping safe online. See page 4 of this issue for information on this year's NCSAM. We will have a speaker from the Cybersecurity and Infrastructure Security Agency (CISA) for our October 13 general meeting presentation.

Check out these URLs to keep informed.

- <https://www.cisa.gov/national-cybersecurity-awareness-month-resources>
- <https://staysafeonline.org/>
- <https://stopthinkconnect.org/tips-advice/general-tips-and-advice>

Each week in October is dedicated to a different aspect of security. LACS members will be forwarded by email any material we may receive on the various topics.

Bad people do scary things out there. We need to keep on top of it all as much as possible. With the pandemic, we now are relying on the internet more than ever.



I even get to go out on the porch once in a while. Not too far from the sliding glass door though, remember to stay between the human and the door. Don't want to get locked out by accident. I hear it's pretty tough in the wild.

GENERAL MEETING REPORT

September 8, 2020

By **Leah Clark**, LACS Editor and President
How the Internet Has Changed the Real Estate Industry

Speaker: **Wade Huie**, LACS, Realtor

Wade has been a real estate agent in Los Angeles since 2003. He recalled the days of face-to-face contacts, door knocking, sending out cards, etc. Those who wanted to buy a house would look through newspaper ads, drive through a neighborhood looking for "For Sale" signs, then they would call the agents listed on them.

The agents had all the information on properties for sale in Multiple Listings Services (MLS) books. Some of the listings would be obsolete by the time the books were printed. Before the internet, the system was not very efficient.

There has been a tremendous cosmic shift in the real estate business, as in other companies, due to the internet. It has mostly been for the better. Realtors are no longer the gate-keepers to all the information. MLS became automated with listings on the computer rather than in the stupid, out-of-date books. The clients are now in charge. They can browse through all the websites which obtain their information, then sell it back to the agents.

The internet's connection with Real Estate is here to stay. No one misses the old-school way of buying and selling property. Most homebuyers now begin their search on the internet, which is mostly kept up-to-date. Much can now be done on a smartphone. Most documents and contracts can now be made online with electronic signatures.

Pricing a house is still an art, not a science. The estimated value of a home can vary on different sites. Improvements or defects may not be considered in the estimates.

Wade said the best thing the internet has done for real estate has been what it has done with pictures. Without going to a home, a buyer can get a feeling about it from images. Visuals are most important, but photos can make or break a sale. Wade showed posted images of homes with much clutter and untidiness visible. Wade then talked about "staging" a home by putting in cool furniture, a few paintings, rugs, etc. enabling it to be sold for more money. The buyer can imagine what a house may look like. Staging may raise the price of a home; it does cost to bring in all that stuff. Thanks to the internet and software, a seller may provide "virtual staging" which costs much less.

The use of video has become common in real estate. Cameras pan around each room to give a sense of what's there. Using drones to depict the home and surrounding neighborhood makes it like walking around in a house. Agents must now become, or hire, filmmakers.

Buying and selling real estate in the U.S has been becoming highly competitive, and both Wall Street and Silicon Valley want in on it. iBuyers will buy your home, fix it up, then resell it on the open market. The "i" stands for *instant*. Wade thinks we may see more of them in the future, especially for those who may need to move quickly.

The internet is not going to go away. It will continue to evolve, and it will be making buying a home easier. Real estate, from a family perspective, is still a local activity. Buyers want someone with the knowledge and skills to help them make what may be the most important financial decision of their lives. If agents don't embrace the new technology, they may deserve to go obsolete.

Wade Huie may be contacted at 310-663-9172, wadepowerbroker@gmail.com, or <https://WadeRealEstateLA.com>.

NATIONAL CYBERSECURITY AWARENESS MONTH 2020



NCSAM 2020: Do Your Part. #BeCyberSmart.

Now in its 17th year, NCSAM continues to raise awareness about the importance of cybersecurity across our nation and ensure that all Americans have the resources they need to be safer and more secure online.

We'd like to welcome and thank those of you joining us for the first time, as well as those who have taken part in the past. Every year, NCSAM conveys a clear message of partnership between government and industry, from the White House to the individual. The **Cybersecurity and Infrastructure Security Agency (CISA)** and the National Cyber Security Alliance (NCSA) are proud to announce this year's theme:

Do Your Part. #BeCyberSmart.

This theme encourages individuals and organizations to own their role in protecting cyberspace, stressing personal accountability, and the importance of taking proactive steps to enhance cybersecurity. Recognizing that all personal devices are potentially vulnerable, NCSA emphasizes if "**You Connect IT. Protect IT,**" and throughout October, CISA and NCSAM will focus on the following areas in our promotions and outreach. Partners are welcome to follow along with NCSA, but they are also encouraged to create their own areas of focus relevant to their organizations.

- **October 1 and 2:**

Official NCSAM Kick-off

- **Week of October 5 (Week 1):**
If You Connect IT. Protect IT.
- **Week of October 12 (Week 2):**
Securing Devices at Home and Work
- **Week of October 19 (Week 3):**
Securing Internet-Connected Devices In Healthcare
- **Week of October 26 (Week 4):**
The Future of Connected Devices

We encourage you to use NCSAM's hashtag **#BeCyberSmart** before and during October to promote your involvement in raising cybersecurity awareness.

Thank you for your continued support and commitment to NCSAM and helping all Americans stay safe and secure online.

Please email our team at

stopthinkconnect@hq.dhs.gov and go to www.cisa.govNCSAM or www.staysafeonline.org/cybersecurity-awareness-month/ to learn more.

Cybersecurity and Infrastructure Security Agency

National Cybersecurity Awareness Month 2020 Team ❖



MICROSOFT'S NEW EMOJI KEYBOARD

By **Nancy DeMarte**, Vice President
The Sarasota Technology User Group, FL
The STUG Monitor
www.thestug.org
vp1 (at) the stug.or

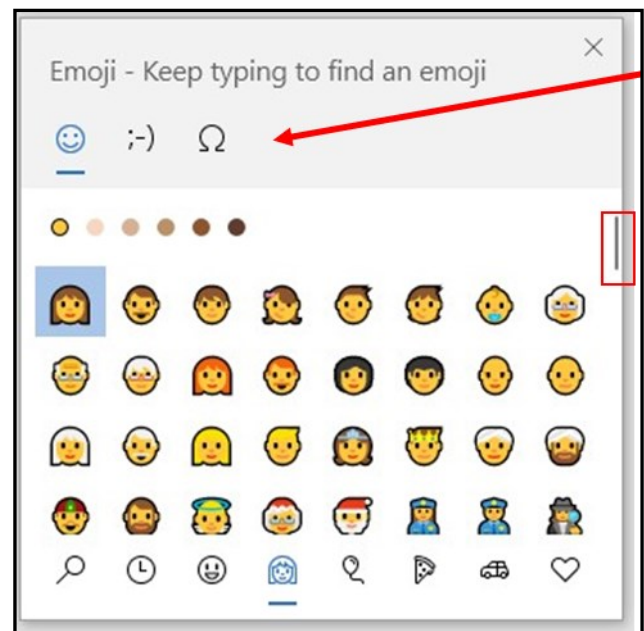
If you are an Apple user, you probably know about emojis. These little head icons express moods by the looks on their faces. They can be part of emails or text messages or any place where text can be typed. The emoji collection on my iPhone has over 100 faces, each with a recognizable facial expression, but the gallery goes way beyond faces. You can send emoji animals, objects, groups of people, plants and flowers, phases of the moon, food and drinks, sports, and many more.

The Japanese created the Emoji. The term was formed from combining the Japanese words for “picture” and “character.” In Western countries, Emoji was originally called Pictograph. Emojis became so popular that a reference site, Emojipedia.org, was created in 2013. It is a search engine for emojis and is worth a visit. Emojis can be used in all the big social media sites like Facebook, Twitter, and YouTube, as well as email programs and other Internet places where you can type.

Microsoft has included a traditional On-Screen Keyboard (OSK) without emojis since the debut of Windows 7. Perhaps noticing the popularity of emojis, Microsoft created its own gallery of emojis and put them in an emoji on-screen keyboard. This keyboard was one of the feature updates Microsoft included with the Windows 10's Fall 2017 Creator Update. It was improved in April 2018 and is now featured among the Ease of Access group of tools in Settings.

To use this keyboard, you are encouraged to enable it, but if you are current with Windows updates, you may be able to skip these steps. The enabling steps begin by clicking the Start

button> Settings> Ease of Access. Then scroll down to Keyboard and drag the Off dot to the right under the heading, “Use your device without a physical keyboard.” Today, most users can easily open the emoji keyboard on their screens by pressing the Windows key while clicking the period or semi-colon key. This works for touch screens, too.



The keyboard contains three major categories along the top.

Emoji, Kaomoji, and Symbols. The Emoji category includes the smiley faces and other objects like those

(☺~☺)	(*/ω*)
(●'~'●)	ヽ(*o▽o*)ノ
four Kaomojis	

seen in Apple products.

Kaomoji includes facial expressions made of punctuation marks and other odd lines, some of which are Japanese. The Symbols category includes Latin symbols, international currency, the copyright mark, and others. Each category can be scrolled down for more choices.

Below are a few tips for using the Windows emoji keyboard:

1. To open the keyboard, click or touch the Windows key and the period or semi-colon.
2. Drag the emoji keyboard anywhere within the window.
3. To close the keyboard, click the X or the ESC key.
4. The magnifying glass symbol is a search engine for emojis.
5. The clock with hands set at 3:00 shows the most recently used emojis.
6. Emoji categories are pictured across the bottom of the keyboard.
7. There is a scroll bar on the Emoji keyboard, but it isn't obvious. It is a short, thin vertical line on the right edge of the keyboard. See the red box around the scroll line in the illustration on page 5. Move your mouse over the line to enlarge the scrollbar and scroll for more emojis.

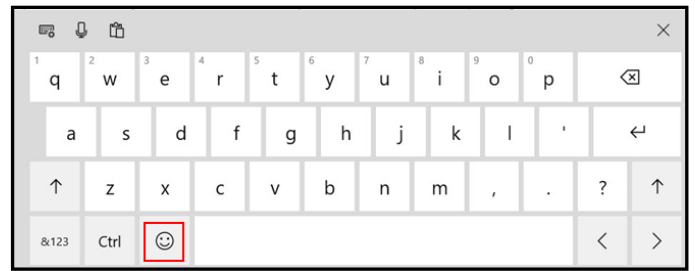
You can pin the emoji keyboard to the taskbar to make it larger and easier to see.

First, right-click the taskbar and left-click the "Show touch keyboard" button. That will

add a small keyboard next to the time and date at the right end of the taskbar, as shown.

Click this keyboard to open the traditional on-screen keyboard, which now includes the emoji icon. (See the top of the next column) Click the face and scroll horizontally to see large versions of all the emojis for each category. (It too is a fine horizontal line below the emojis.)

Then try out a few emojis on friends. They usually bring a smile.



PROTECT YOUR COMPUTER AGAINST POWER OUTAGES

By **Matt Batt**, Past President

The Sun City Central Computer Club, FL

www.scccomputerclub.org

mattbatt (at) gmail.com

The two leading causes of damage to computers, TVs, modems, and other sensitive electronics are a sudden loss of power and power fluctuations. Basic power strips do not protect your PC from any sort of electrical fluctuations. Surge protectors can protect against power surges, but they offer no protection against drops in line voltage or power loss.

To protect your computer against power outages or voltage fluctuations, you need a battery backup. Uninterruptible Power Supply (UPS) units are basically surge protectors that contain a battery inside. In the event of a power failure, your computer will seamlessly switch over to battery power and continue to run. This gives you time to shut down your machine without any damage.

Many UPS units come with software that can detect when the unit switches to battery power, and they shut down automatically in your absence.

There are many different UPS offerings on the market. Small units can keep a desktop computer running for 5-10 minutes or longer, and more expensive units can keep multiple computers running for hours.

The most important step in choosing a UPS is to buy one that has enough power to give your computer system enough time to shut down properly. It is possible to calculate the power usage of a computer system by analyzing all of its components. For the purposes of this article, we can estimate the requirements of a typical computer user in our club. UPS systems are rated VA (Volt-Amperes.) You may ignore how it is calculated, but a typical low-end desktop needs a UPS rated at about 480 VA, while a high-end computer with a high-end video card would need a UPS rated as high as 1200=1500 VA.

Two types of UPS units have an application for home electronic systems.

- The least expensive is a Standby UPS. This type of unit charges its battery and waits. When the power cuts off, it will automatically switch to the battery for back-up power. The switch takes milliseconds and is fast enough so that most electronics do not shut down.
- For a higher cost, you can get a unit with Automatic Voltage Regulation (AVT) that corrects power fluctuations without switching to battery power. This feature protects you from instabilities in line voltage often experienced in lightning storms.

Here are a few other considerations to note.

- Some units include software for your computer that senses when the UPS switches over to battery power, and they can automatically initiate the shutdown process.
- UPS units generally have a mix of power/surge protected and surge protected only outlets. Make sure that there are enough outlets for your needs.
- Some UPS units include surge-protected/filtered ports for your Ethernet and Coax cables. Personally, I don't use these as I've had problems with ethernet cable performance degrading through a UPS.

- Be sure to get units that have user-replaceable batteries. UPS batteries last 3-5 years. When a battery fails, you'll either need to buy batteries or buy a whole new unit.

I've used Cyberpower and APC UPS units, and they all worked as advertised. Both of the two pictured below are from Amazon, and they have shutdown software and replaceable batteries.

- The APC is rated at 500 VA and costs \$55.00. It has five outlets with Battery backup and two with just Surge protection. It's the model I use on most of my computers and TVs.
- The CyberPower has AVR, is rated at 1000 VA, and costs \$109.00. It has five outlets with Battery backup and four with just surge protection. I use one like it for my main computer, Internet modem, router, and for my phone system.



Be careful out there! Think about having a UPS system on your computers, TV, home theater system, and even your phone system to prevent damage caused by power surges and power loss. ❖



LACS NOTICES

WELCOME ALL

Gavin Faught, Treasurer

New Members (2)

Clara Harris

Judi Welch

Renewals (11)

Deborah Alpert	Lance Hegamin
Rosalie Cirlin	Harold Igdaloff
Shelby Croft	Helena Karagozian
Edie Ditmars	Robert Swarthe
Beverly Fedel	George Wolkon*
Steve Halpern*	

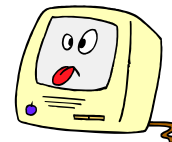
* Contributor



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 www.jimopi.net.

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

JOIN OUR MAIL LISTS

LACS members can join one, or both, of the lists shown by putting just their name in the message body of an e-mail to each of the lists they wish to join from the e-mail address they wish LACS to use.

PC@LACS+subscribe (at) groups.io

LACSLIST@LACS+subscribe (at) groups.io

PC is for official LACS business only.


Lacslist is for any other computer or technology – related messages and questions.

HOW TO CHANGE YOUR CONTACT INFORMATION

Go to www.lacspc.org. 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, email your changes to **membership (at) lacspc.org**, or mail it to LACS, 11664 National Blvd. #343, Los Angeles, CA 90064-3802.

LACS IS ON TWITTER

On **Twitter**, follow us at:

https://twitter.com/LA_CompSoc or click on this icon  to see what's there.

YOUR FRIEND IN THE FIELD

Friend of LACS and presenter,

Christian Knudsen, is available for hire, and he will be giving LACS members a 15% discount through the end of 2020.



Christian specializes in educating people of all skill levels in computers (both Mac & PC), smartphones, tablets, all things internet related, office and productivity apps, web development, home entertainment equipment and media production.


Please call for a free consultation (310) 571-8755. Or visit <https://dgtcreative.com/pp/> for more information.

MEETUP

Our Meetup group is called:

"Los Angeles Computer Society and Technology Meetup."

Please join and **RSVP** for our general meetings - it's free.

Click on this icon  or go to <http://www.meetup.com/Los-Angeles-Computer-Society-and-Technology-Meetup/> to see our Meetup Page. Then click on **"Join Us."**

LACS CALENDAR**October****LACS Board Meeting****Date:** Monday, October 5, 2020 via Zoom**Time:** 7:00 P.M.**Where:** At your home via Zoom**General Meeting****Date:** Tuesday, October 13, 2020 via Zoom**Time:** 7:30 P.M. (Open from 6:30 P.M.)**Where:** At your home via ZoomOctober 5: **LACS Board Meeting**

October 12: Columbus Day

October 13: **LACS General Meeting**

October 15: National Boss's Day

October 31: Halloween

**VISIT OTHER USER GROUPS**

Check out this URL for information for visiting other user groups' Zoom meetings, and for a lot more ideas for using Zoom and managing dealing with the stay-at-home restrictions.

<https://apcug2.org/tech-things-to-learn-while-sheltering-in-place/>

**GENERAL MEETING PRESENTATIONS
VIA ZOOM****October 13:** Cybersecurity and Understanding Resilience**November 10:** Saving Your Life with Wearable Technology, Part 2**December 8:** Virtual Holiday Celebration

Due to the pandemic, our future presentations may be uncertain. Check email and *User Friendly* for updates.

ZOOM MEETINGS

To join an Zoom meeting, click on the URL on the invitation you will receive via email before the meeting and follow the prompts.

Contact Leah Clark, leahjc (at) sbcglobal.net, if you have any questions, or if you don't receive the link by the morning of the meeting day. Try to enter at least five to ten minutes before the meeting's start time to avoid interrupting the meeting.

**PODCASTS & ZOOM
RECORDINGS**

To listen to the podcasts of most of our past in-person general meetings, go to <https://www.lacspc.org/category/audio-files/>.

Click on the session you want to hear. **LACS members will receive links to the recordings of Zoom meetings via email.**

**USER FRIENDLY BACK ISSUES
AND INDEXES**

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

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

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

MEMBERS HELPING MEMBERS

LACS members volunteer to help other members solve hardware and software problems by telephone during the hours listed below. Select the topic from the list and then call a person whose number is listed next to it. Or you may use a Helper's e-mail address, found in your LACS Roster. We hope that you find this free service useful. **If you are experienced using a particular program or know a topic, 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 <Leahjc (at) sbcglobal.net> or call her at 310-677-2792. More Quick Consultants, and more categories are always needed. You may decline or postpone a call if it comes at an inconvenient time.

Adobe Creative Suite: PDF,
InDesign, PhotoShop, etc. - 10
Android Smartphones - 8
Apple devices - 12
Anti Malware and Backup - 7, 8
Digital Imaging, Editing - 11
Digital Photography - 11
Dragon Naturally Speaking - 3
Genealogy - 8
Groups.IO - 8

Hardware - 7
Linux - 4
Lotus Word Pro, Approach - 7
Mozilla Firefox - 7
MS Excel - 8, 12, 13
MS Word - 1, 3, 13
MS Outlook - 8, 1, 10
MS PowerPoint - 12
MS Publisher - 2

Open Office - 6
Photoshop - 10
Quicken - 8, 13
Thunderbird - 7
Utilities - 7, 8
Visual Basic - 5
Websites - 5
Windows - 6, 7, 8
WordPerfect - 8
Zoom - 2, 9

Number	Name	Preferred Phone for Calls	From	To
1	Beckman, Loling	310-471-7893	10:00 AM	6:00 PM
2	Clark, Leah	310-677-2792	7:00 AM	5:00 PM
3	Hershman, Irv	310-397-9453	11:00 AM	11:00 PM
4	Hughes, Bill	424-259-1818	Any	Any
5	Ialongo, Gilbert	310-641-7906	9:00 AM	5:00 PM
6	Johnson, Carol	310-372-8535	10:00 AM	9:00 PM
7	McKnight, Jim	310-823-7829	8:00 AM	7:00 PM
8	Nordlinger, Stephanie	323-299-3244	9:00 AM	5:00 PM
9	Presky, Mark	310-780-3302	Any	Any
10	Rozek, E. J.	310-823-3811	Noon	8:00 PM
11	Silverstein, Elliot	310-670-1544	10:00 AM	10:00 PM
12	Van Berkomp, Paula	310-398-6734	9:00 AM	5:00 PM
13	Wilder, Joan	310-472-8445	9:00 AM	9:00 PM

OFFICERS, DIRECTORS AND LEADERS

Title	Name	Term	Telephone
President	Leah Clark	2020	310-677-2792
Past President	Stanley Johnson	2020	424-216-6984
Vice President	Stephanie Nordlinger	2020	323-299-3244
Secretary	Marcia Jacobs	2020	310-838-1409
Treasurer	Gavin Faught	2020	310-346-2637
Director	Newton Bernstein	2021	310-945-9111
Director	Charlotte Semple	2021	310-398-5052
Director	Paula Van Berkomp	2021	310-398-6734
Director	Howard Krivoy	2020	310-717-7465
Director	Mark Presky	2020	310-780-3302
Director	E. J. Rozek	2020	310-823-3811
Director	Open	2020	
APCUG Rep.	Leah Clark		310-677-2792
Car Pool Coordinator	Freda Sanders		323-230-3278
Corporate Counsel	Stephanie Nordlinger		323-299-3244
CCSC Computer Lab	Loling Beckman		310-471-7893
Database Manager	Sylvia Davis		323-293-5004
Greeter	Freda Sanders		323-230-3278
Assistant Greeter	Penny McKnight		310-823-7829
Groups.IO Lists	Stephanie Nordlinger		323-299-3244
Hospitality Chair	Sylvia Davis		323-293-5004
Newsletter Editor	Leah Clark		310-677-2792
Program Chair	Stephanie Nordlinger		323-299-3244
Publicity – Press	Mark Presky		310-780-3302
Publicity – Online Media	Stanley Johnson		424-216-6984
Quick Consultants	Leah Clark		310-677-2792
Webmaster	Paula Van Berkomp		310-398-6734

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Webmaster sitemaster (at) lacspc.org

E-mail ContactUs (at) lacspc.org **Change of Address** membership (at) lacspc.org

The **ContactUs (at) lacspc.org** address goes to our president and vice president.

If the message is for another officer or member, they will forward it to the correct person.

To contact other officers, directors, leaders, or members directly, members are encouraged to use our roster for phone numbers and e-mail addresses.

BLUETOOTH 5.0 IMPROVED WIRELESS TECHNOLOGY

By **Phil Sorrentino**, Contributing Writer

The Computer Club, FL, March 2020

www.sccccomputerclub.org

Philsorr (at) yahoo.com

Bluetooth 5.0 is a noticeable improvement over the previous version, and it is finally finding its way into new devices. If you have had problems with Bluetooth pairing or staying connected in the past, Bluetooth 5.0 may improve or even fix the problem. But, both devices will probably have to be up to the new standard.



Bluetooth is a wireless technology standard used for exchanging data between fixed and mobile devices over short distances. Both Bluetooth and Wi-Fi are examples of wireless technology that use the unlicensed 2.4GHz frequency spectrum. Both have many applications in today's offices and homes, such as: setting up networks, printing, connecting cooperating devices, and transferring data files among computers and smart devices.

Wi-Fi vs. Bluetooth

Wi-Fi is intended as a replacement for cabling in large work areas. Bluetooth is intended as a replacement for cabling among equipment in close proximity.

Wi-Fi is intended for use as a local area network (LAN). Bluetooth is intended for use in a smaller, personal area network (PAN). Just for completeness, a Wide Area Network (WAN) is a communications network that spans large geographic areas such as cities, states, or even countries – think *Internet*.

Bluetooth, nowadays, can typically be found in smartphones, laptop computers, tablets, headphones, and almost all new cars. Seven years ago, I explored Bluetooth and reassured everyone that it was not a dental diagnosis. At that

time, it was at version 4.0, so it's probably time to take another look. Technology is always evolving and hopefully improving.

Here is a little history for you tech history buffs. Bluetooth has been around for quite a while. Work on Bluetooth was started in 1994, and the Bluetooth 1.0 specification was released in May 1998. The initial version specified a data rate of fewer than 1 Mbps (Megabits per second). It had many problems, and manufacturers had difficulty making their products interoperable. Bluetooth 2.0 was released in November 2004 with a faster data rate (approx. 2 Mbps). Bluetooth 3.0 was released in April 2009. Bluetooth 4.0 was released in June 2010. Bluetooth 5.0 was released in June 2016 with increased range, speed and capacity, and is the current standard. Bluetooth 5.0 is improved in many categories, as shown below:

Feature	Bluetooth 5.0	Bluetooth 4.0
Speed	2 Mbps	1 Mbps
Range	40 Meters	10 Meters
Message Capacity	Larger	Small
Battery Life	Longer	Shorter
Reliability	Higher	Low
Security Control	Better	Less Secure

Bluetooth was initially conceived as a wireless alternative to the old serial RS-232 data cables. Bluetooth is a network and thus can connect many devices, unlike RS-232, which was strictly serial point-to-point. Bluetooth is a wireless technology that uses short-range radio links and is intended to replace the cable(s) connecting portable and/or fixed electronic devices. The hope is

that it will allow for the replacement of the many proprietary cables with one universal radio link. Bluetooth can provide a way to connect and exchange information between devices such as Smartphones, laptops, personal computers, printers, Global Positioning System (GPS) receivers, digital cameras, video games, etc.

So, Bluetooth is a communications standard for interconnecting electronic devices. To that end, it uses a form of data packet switching to transmit digital data via the wireless communications link. Bluetooth operates in the unlicensed Industrial, Scientific, and Medical (ISM) 2.4GHz frequency band, and it avoids interference from other signals in that band by hopping to a new frequency after transmitting or receiving each packet. This radio technology is called frequency-hopping spread spectrum. It chops up the data being sent and transmits chunks of it on up to 79 different frequencies. (Guess who invented frequency-hopping? Answer at the end of the article.)

Bluetooth is primarily designed for short-range communications with low power consumption. There are three power levels defined in the standard, 100 mW (Class 1), 2.5 mW (Class 2), and 1.0 mW (Class 3), where mW (milliwatt) is a measure of transmitter output power. The higher the power level, the further the data can possibly be transmitted. Class 1 suggests an operating range of up to 100 meters, Class 2 suggests 10 meters, and Class 3 suggests 1 meter. Most of the devices I've used have been Class 2.

Because Bluetooth devices use radio (broadcast) communications, they do not have to be in the line of sight of each other. Bluetooth makes it possible for these devices to communicate with each other and transfer the information as long as they are in range.

A PC uses a Bluetooth adapter to communicate with other Bluetooth devices. While some desktop computers and most recent laptops come with a built-in Bluetooth adapter, others

require an external adapter, usually in the form of a Bluetooth Dongle. Bluetooth allows multiple devices to communicate with a computer over a single adapter. Microsoft Windows 10 supports Bluetooth 5.0, but your computer may have a Bluetooth device that was built to an earlier Bluetooth version. (Along with the Bluetooth version, there are Bluetooth Profiles, but we'll leave that as a subject for a future article.)

Though you may not have thought about it, here are some of the more common applications of Bluetooth:

- Wireless control of, and communications between, a mobile phone and a hands-free headset. This was one of the earliest applications.
- Wireless communications with PC input and output devices, the most common being the mouse and keyboard.
- Replacement of wired serial communications used in test equipment, GPS receivers, medical equipment, bar code scanners, and traffic control devices.
- A link between game consoles such as the Nintendo Wii, and the Sony PlayStation and their respective controllers.
- A link between a video camera and a remote Baby or Pet Monitor.
- A link between a Garage Door Opener Motor and the Remote Garage Door Opener Controller.



As you can see from this list, there are many reasons for computing devices to communicate with each other. And as more devices become smart, there will probably be more uses for the Bluetooth wireless technology.

(Hedy Lamarr) ❖

DECODING CPU REVIEWS

A Beginner's Guide to Processor Terms

By Ian Paul, @IANPAUL
How-To-Geek, June 3, 2020



yishii/Shutterstock

CPU reviews are complicated. Before you even get to the performance benchmarks, you have to navigate a maze of terms, like silicon, die, package, IHS, and sTIM. That's a lot of jargon with little explanation. We'll define the key parts of a CPU that PC enthusiasts discuss the most.

Please note this isn't intended to be a deep dive, but, rather, an introduction to common terminology for budding CPU geeks.

Start with the Silicon

More than 10 years ago, Intel shared the basics of how it creates its processors, from raw materials to the finished product. We'll use this process as a basic framework as we look at the key component of a CPU: the die.



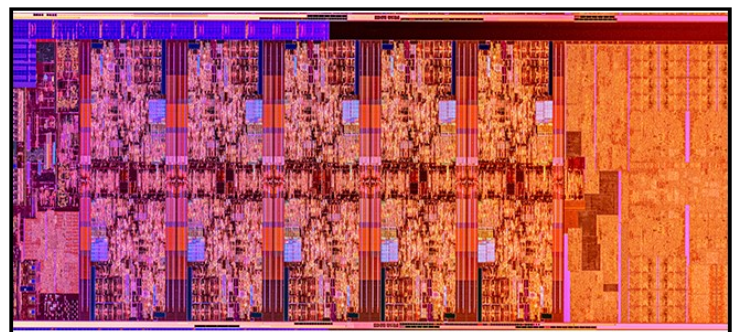
Intel

The first thing a CPU needs is silicon. This chemical element is the most common component in sand. Intel starts with a silicon ingot, and then slices it into thin discs, called wafers.

The wafers are then polished to a "mirror-smooth surface," and then the fun begins! The silicon transforms from a raw material into an electronic powerhouse.

The silicon wafers get a photoresist finish. Then, they're exposed to UV light, etched, and get another layer of photoresist. Eventually, they're doused with copper ions and polished. Metal layers are then added to connect all the tiny transistors that exist on the wafer at this point. (As we mentioned previously, we're only covering the basics here.)

Now, we come to the point we care about. The wafer is tested for functionality. If it passes, it's sliced into small rectangles called dies. Each die can have multiple processing cores, as well as a cache and other components of a CPU. After slicing, the dies are tested again. Those that pass are destined for store shelves.



The silicon die for a 10th generation Intel Core processor. Intel

That's all a die is: a little piece of silicon loaded with transistors that's the heart of any processor. Every other physical part helps that little piece of silicon do its job.

But, here's the kicker: depending on the processor you get, a CPU can have either one or multiple silicon dies. One die means all

the processor's components, such as cores and cache, are on that one piece of silicon. Multiple dies have connecting material between them.

There's no easy way to know for sure whether a particular CPU has single or multiple dies. It's up to the manufacturer.

Intel is famous for using a single die for its consumer processors. This is called a monolithic design. The advantage of a monolithic design is higher performance, since everything is on the same die and there's little delay in communication.

However, it's harder to make advances when you have to pack smaller and smaller transistors onto the same size of silicon. It's also harder to produce single dies that perform with all cores firing—especially when we're talking about eight or 10 cores.



The layout for an AMD Threadripper processor using multiple CCXs. AMD

This is in contrast with AMD. The company does make some monolithic processors, but its Ryzen 3000 desktop series use smaller silicon chiplets, which currently have four cores on the silicon. These chiplets are called a core complex, or CCX. They're packed together to make a larger Core Complex Die (CCD). That CCD is what counts as a die in AMD's parlance. It's several small silicon chiplets that are connected to create a functioning CPU.

AMD processors also have a silicon die separate from the CCDs called the I/O die. We won't get into the details of that here, but you can read more about it in this [June 2019 article from TechPowerUp](#).

Given how complex it is to create functioning silicon dies, it's obviously much easier to create a smaller unit of four cores, rather than a single die with 10 cores.

The CPU Package

Once the die is finished, it needs some help to talk to the rest of a computer system. This usually starts with a small, green board, often referred to as the substrate.

If you flip over a completed CPU, the bottom of the green board has gold contacts (or pins, depending on the manufacturer.) Those contacts or pins fit into the socket of a motherboard and allow the CPU to talk to the rest of the system.

Jumping back inside our processor, we haven't covered up the silicon die yet. The major component here is the thermal interface material, or TIM. The TIM improves thermal conductivity (important for CPU cooling). It usually comes in one of two forms: thermal paste or sTIM (soldered thermal interface material.)

The TIM material can vary between generations of CPU from the same manufacturer. You can never really know what a particular CPU has unless you read CPU news or open ("delid") a finished processor yourself. For example, Intel used thermal paste from 2012 through 2018, but then [started using sTIM](#) on its upper-range, ninth-generation Core processors.

At any rate, these are the pieces that make up the package: the die, the substrate, and the TIM.





A render of an AMD Ryzen CPU. The brand-name is printed on the IHS. AMD

Finally, on top of the package, there's an Integrated Heat Spreader, or IHS. The IHS spreads out heat from the CPU onto a larger surface area to help reduce the CPU's temperature. The CPU fan or liquid cooler then dissipates the heat building up on the IHS. The IHS is usually made of nickel-plated copper. The CPU's name is printed on it, as shown above.

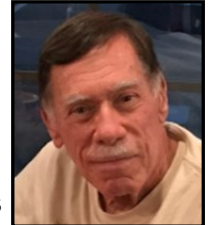
That wraps up our tour of the CPU. Again, the die is the bit of silicon that contains the processor cores, caches, and so on. The package includes the die, PCB, and TIM. And, finally, you also have an IHS.

There's a lot more to it than that, but these are the essentials on which CPU news and reviews tend to focus.

Ian Paul is a freelance writer with over a decade of experience writing about tech. In addition to writing for How-To Geek, he regularly contributes to PCWorld as a critic, feature writer, reporter, deal hunter, and columnist. His work has also appeared online at The Washington Post, ABC News, MSNBC, Reuters, Macworld, Yahoo Tech, Tech.com, TechHive, The Huffington Post, and Lifewire. His articles are regularly syndicated across numerous IDG sites including CIO, Computerworld, GameStar, Macworld UK, Tech Advisor, and TechConnect. ❖

RECOVER YOUR WI-FI PASSWORD

By **David Kretchmar**, Computer Technician
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Computer users often seek technical support when they are unable to access the Internet via their home wireless system.

First, the technician will usually walk the user through the reset procedure for the router or router/modem (turn them off and on). If that does not fix the problem and it is determined the router is putting out a good signal, the subsequent conversation often goes something like this:

Technician: What is your password for your router?

User: I don't have a password.

Technician: If your router is not secured, i.e., password-protected, you should be able to connect to it.

User: I don't have a password. I just click on the Google (or another browser) icon and get online.

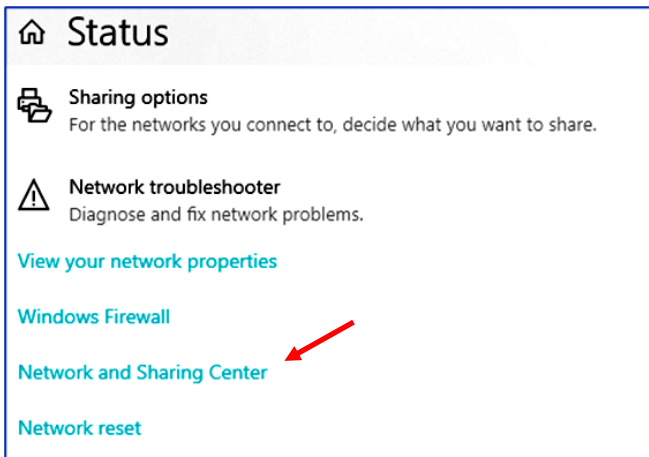
At this point, Technician explains to User that the Wi-Fi password is stored on User's computer and that a few steps are required to access that password. Technician might guide User through a process to recover the password.

If the Computer Connects to the Wi-Fi Automatically

With the latest version of Windows 10, Microsoft has buried the Wi-Fi password on a computer more deeply than with prior versions of Windows. You can still find your Wi-Fi password using the following procedure.

Find Your Way to the “Wireless Properties”

Right-click on the Internet access icon on the right side of your Taskbar, then click on “Open Network and Internet Settings.” Click on “Status” then click on “Network and Sharing Center.”

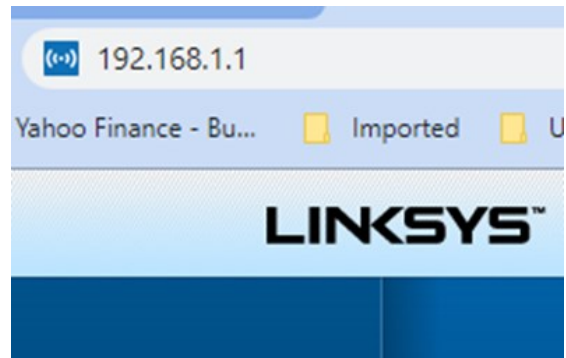


Under “Internet,” click on your network name (in blue) then click on “Wireless Properties.”

Under “security,” you can see the hidden password after you click on “Show Characters.”

If You Only Own a Smartphone Or Tablet, or You Have a PC Which Has Not Stored the Wi-Fi Password

Log in to your router as an administrator. You can access your router by entering its IP address into your browser, such as Google Chrome or Microsoft Edge. You can research the default IP address of your router by Googling “IP address [brand name of your router].” Every router I’ve dealt with had an address of “192.168.X.Y.” The most common value for both X and Y is the number 1. If that does not work, try substituting the numbers 0 or 2 for X.



After you’ve logged in, you should be able to find the Wi-Fi settings on the Administrative pages of your router. There you can look up your Wi-Fi password.

If You Are Like Many People

The Wi-Fi password is written on a sticker on the back of your router. This is how I usually set up home routers. It might be a good thing to do after you have recovered your Wi-Fi password.

This is a simple but effective strategy since it is so easy to find.

A burglar would have to break into your home to steal your password, and they probably would focus on more tangible items.❖



JERE'S TECH TIPS

For many helpful tips and tricks for all aspects of computing, see *Jere's Tech Tips* at <https://apcug2.org/jerestips/>.

TECHBOOMERS.COM

teaches how to use various websites and internet-based applications.

- <https://TechBoomers.com>
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LAUGHING OUT LOUD



Give me three words for 2020!

Control Alt Delete

(Received from Sylvia Davis)

FINANCIAL REPORT

A LACS member who wishes to see or has questions about our financial reports may contact our treasurer.

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Associate members are those who live in the same household or work at the same address as a regular member; they do not receive their own subscriptions to *User Friendly*, but may read it on the LACS website. **Students** must prove full-time status.

Monthly general meetings will be via Zoom during the pandemic stay-at-home orders. Members also enjoy these special benefits:

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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.

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