

User Friendly

LACS
**A Computer and
Technology
User Group**

IN THIS ISSUE

From Your President / Editor	2
A Common Computer Problem and How to Fix It	3
Stop Closing Apps on Your iPhone	3
Taking Technology Too Personally	4
Create a 2022 Calendar	7
LACS Notices	8
LACS Calendar	9
Visit Other Computer User Groups	9
Members Helping Members	10
Officers, Directors & Leaders	11
Complete Robocall Deterrence Part 2 of 3	12
Describing the Quantity of Computer Storage	15
Special Offers	18
Laughing Out Loud	18
Membership Information	19
LACS on Zoom	20

APCUG EVENTS

Watch your email for APCUG workshops and other upcoming events.

LACS IS A MEMBER OF APCUG

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



An International
Association of Technology
and Computer User Groups

JANUARY 11, 2022

Meeting Time: 7:00—9:00 PM—via Zoom

6:30—7:00: Socializing and Members' Questions

Topics: **1. Two-Factor Authentication**

2. My Tips for Using YouTube

Speaker: **Ron Brown**, APCUG Speakers Bureau

Silvercom Computer and Technology Club, Mesa AZ

Members who have other subjects or problems they want to discuss may ask questions before 6:55 and at the end of the meeting (c.8:30—9:00.)

Google is now auto-enrolling 150M (Gmail?, Chrome-book?, Other?) accounts for Two Factor Authentication. 2FA is much more secure than passwords. Ron Brown will talk about why you should turn on 2FA, and he will take questions. He also will discuss how he uses YouTube with Q & A.

Meet Our Presenter

Ron is a retired technologist. He was a Canadian Flight Surgeon and then started a family medical practice on Vancouver Island. Ron wanted an electronic office and bought an interest in a start-up software company in Calgary that made Electronic Patient Records. As his family practice grew, so did his software company. For 20 years, he traveled across Canada and the U.S. giving papers and speaking at many conferences.

Ron retired, sold his medical practice and other business interests, and he and his wife traveled for two years. Ron loves technology and does presentations for Tech for Seniors and computer clubs. He spoke to us on *Saving Your Life with Wearable Technology* in 2020 and *What Will 5 G Mean for You* in 2021.

Tuesday, January 11, 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 on or about January 9. Guests may ask for the link by emailing Leah Clark at leahjc@sbcglobal.net before January 9.

More information about LACS is at www.lacspc.org.



FROM YOUR PRESIDENT / EDITOR



HAPPY NEW YEAR

Wishing all LACS members

- 12 months of success
- 52 weeks of laughter
- 365 days of fun
- 8,760 hours of joy
- 525,600 minutes of good luck
- 31,536,000 seconds of happiness

2022

PROOF READERS NEEDED

Your editor would like to have another proof-reader or two. It is much too easy to miss errors and typos. This is usually done between the 23rd and 26th of each month. If you would like to give it a try, please email me. I will appreciate any help I can get!

UPDATES

With the start of a New Year, I want to update the information in *User Friendly*. Please look over pages 8, 9, 10, 11, 18, 19, and 20 and let me know if anything is in error or out-of-date. Would you like your name added to "Members Helping Members" on page 10? And you may get the help you need by consulting one of the members listed on page 10.

2022 ROSTER

It is almost time to publish the 2022 LACS Roster. **Please inform me of any contact changes in phone and email.** I will need changes by February 15. The area code for a member's phone number was wrong for four years, and wasn't noticed! Please check carefully. Let me know if you don't want your contact info published in the roster.

IN MEMORIAM

With sadness, I announce the passing of our long-time member, Nancy Cattell on December 21, 2021. She was two weeks short of 101 years old.

Here are a few remembrances from LACS members. I will

publish more in the February issue, and will notify you of a Zoom memorial service being planned by her family. Nancy was an avid photographer and traveler, and she led our Digital Photography SIG for years. I learned a lot from her.



Nancy on Her 90th Birthday

Fred Kong: She did so much to move and improve our club and especially the Digital Photo SIG. It impressed me how she showed up so often with a new top-of-the-line camera. I wonder what she did with all the old ones.

Ruth Petrucha and her friend Sue Inman fondly remember the great times they shared with Nancy and others in Kazakhstan and several other "stan" countries.

Gilbert Ialongo: Very sorry to hear about the passing of Nancy. She was a force in the Digital Photo SIG. An intrepid world traveler, she regaled us with photos from exotic parts of the world. And of course she often came to the meetings with new cameras and lenses.

Edie Ditmars: Oh, so sad. I remember Nancy from years ago, especially when I was twisting slowly in the winds of estate issues upon the death of my mother.

Although Nancy had long since retired from legal work, she helped me with something that I can't now recall. Very generous of her. There are a few that I wish I could wave a magic wand over. Nancy was one.



To be continued

A COMMON COMPUTER PROBLEM AND HOW TO FIX IT

By **Mark Presky**, LACS Director

Over the years, computer hard drives have gotten larger and larger. But programs and the other files we load onto our computers have also gotten larger and more numerous. Eventually, this often becomes a problem when one's computer starts running slower, or when one's computer informs you that it just cannot hold anymore.

One way to deal with this problem is to free up space on the hard drive or SSD (solid state drive). Use the built-in Disk Cleanup tool in Windows 10. Click on the Start menu. Choose All Programs. Select Accessories, then System Tools. Click on Disk Cleanup. Under the Files to delete heading, choose which file types you want to remove. If you're not sure about which file types to get rid of, select each one in turn and read its description. When you've selected the file types to delete, click OK.

Another method to free up space is to manually go through your files and delete the many of them that you don't need or want. Image (photos), audio (music), and video (audio and image) files can take up huge amounts of file space. How many photos of little Tommy, or of Grandma from your last birthday celebration do you need? I'll bet you have many duplicates of virtually every shot. Delete the duplicates, at the least. Have music files on your computer that you never listen to? Again, delete 'em. Now repeat this process with your vacation photos. Lots of old photos of your ex? Remember that song from the movie "South Pacific?" Wash those files right out of your computer.

Another trick here is to reduce the file size of those photos. Most cameras produced in the last several years take photos that are each over two megabytes (MB) in size. Unless you plan to print those large file-size photos, you

might think about reducing each photo to between 200 and 400 kilobytes (KB). The reduced file size photos won't look any different to you when you view them on your computer. One can even reduce the photo file sizes en masse. If taken on your iPhone, the phone will ask you what size you want the file to be when you send them, via email, to your computer. I use IrfanView, but several other programs do this.

Going through those extra, unneeded files can be laborious and time-consuming, but that might beat having to buy another computer, having a larger hard drive installed and having all the files transferred, or having your computer crash. ❖

STOP CLOSING APPS ON YOUR IPHONE

By **Benj Edwards**

How to Geek, Dec. 21, 2021

If you constantly close apps on your iPhone while attempting to speed things up or save battery life, you're doing the opposite, and you are making your iPhone perform worse. Here's why.

iPhone Handles System Resources Automatically

Many people might be familiar with how apps run on a Mac or a Windows PC. On those platforms, if an application is running in the background, it can still be using up CPU cycles or taking up RAM. Conventional wisdom says that closing those programs will make your PC or Mac perform better. Officially, Apple says, "You should close an app only if it's unresponsive."

Re-launching Apps Hurts Performance and Battery

In fact, when you force an app to close on your iPhone, it will not only slow down your app experience but will also use up more battery life. That's because, once an app is

closed completely, it needs to re-launch and reload all of its resources the next time you open the app. That takes extra CPU power, which uses up your battery faster. Relaunching a completely closed app is also slower than switching quickly to a suspended app. So, instead of increasing performance and saving battery life, regularly closing apps on iPhone will actually do exactly the opposite. There is one exception, however. Sometimes a background app can check for new information. If that app is programmed improperly, it might use more battery life than usual. If an app is abusing its resources in the background, you might see evidence of it in the “Battery” section of the Settings app. In that case, don’t force quit. Instead, disable Background App Refresh in Settings.

Sometimes You Still Need to Close Apps

Despite everything I just wrote, there are still a few legitimate reasons you might need to force-close an iPhone app. If an app stops responding or isn’t working properly, it’s a good idea to bring up the app switcher and close the app completely. To do so, you’ll need to perform a different action depending on the type of iPhone you have:

- **On iPhone X or later:** Swipe upward from the bottom of the screen toward the middle of the screen, then lift your finger.
- **On iPhones with Home buttons:** Double-press the Home button located below the screen.

When the App Switcher opens, you’ll see thumbnails of apps that are suspended in the background. To force close an app, swipe its thumbnail upward, off the screen.

When the app disappears, the app has been closed completely. The next time you tap its icon, it will re-launch itself.

Even though Apple allows you to force-close Apps in this manner, doing so should be a very rare occurrence. iOS takes care of

multitasking in an elegant and efficient way. Good luck!

Benj Edwards

Benj Edwards is an Associate Editor for How-To Geek. For over 15 years, he has written about technology and tech history for sites such as The Atlantic, Fast Company, PCMag, PCWorld, Macworld, Ars Technica, and Wired. In 2005, he created *Vintage Computing and Gaming*, a blog devoted to tech history. He also created *The Culture of Tech* podcast and regularly contributes to the Retronauts Retro-gaming Podcast. ❖

TAKING TECHNOLOGY TOO PERSONALLY

by **Greg Skalka**, President
Under the Computer Hood User Group
Drive Light, May 2021
www.uchug.org
president (at) uchug.org

When I was growing up, there seemed to be more universal and unifying experiences in our lives related to technology. We had much less tech than today, but it served us well and was more common in its applications and experiences. While there were the ‘have’ and ‘have not’ divides initially, new devices were often adopted relatively quickly, and usually went to fairly high levels of usage across society. This provided a common basis of experience for most people. Television often provided a common topic that many strangers could discuss. With few channels and limited programming, many people were watching the same things. You could talk to your friends about the shows you watched the night before as they likely watched some of the same ones. Telephones were very basic but provided a capability that everyone had to have. The instruments were all similar as Ma Bell con-

trolled the technology and the market. The rotary dial of the phone and the channel knob on the TV provided simple, standard user interfaces. Anyone versed in using a phone or TV set could likely operate anyone's phone or TV. Driving a car was the same; with its standardized controls, any driver could drive almost any vehicle and use most of the accessories. Our homes had standardized appliances and lighting systems, providing common user experiences.

Today we have much more technology, much more complex technology, and more diverse technology. In addition to more capabilities, we have more choices, with more competition in the marketplace. As a result, there is much less standardization and much more personalization. Choice can be good, but with more options, there is often less consensus. There are more ways to personalize your experiences, which means fewer people use the same things, watch the same things or do the same things. This can result in fewer people caring about the same things as you do. While our technology supposedly enables greater communication, the countless choices, versions, and variations we can have can sometimes be an isolating factor in society.

It is great to have thousands of choices on television, but having a shared cultural baseline is more difficult when everyone watches something different. Choices do not end with content; how you watch can be personal. Fewer people watch "broadcast" television (over the air); we often choose cable, satellite, or streaming. Music is consumed in the same ways with the same multitude of choices. If you do not like what is playing, tell Alexa to skip to the next song. More and more, our entertainment is "on demand." We more often watched shows or listened to music with others; now, we are more likely to consume media individually. Instead of getting together to listen to that new album, we

have our personal playlists.

The introduction of the "personal" computer may not have started the trend, but it seemed to accelerate it. First, families used to sit around the radio in the evenings for entertainment; later, the focal point was the living room television. The personal computer pushed everyone to their own devices. I remember having four computers in our house when our two children lived with us. Now there are only two of us here, but we still have four computers in the house.

Smartphones are the ultimate in "personal" devices. Almost everyone has one. However, they are not the same; they could be iPhone or Android, and any number of makes, models, and screen sizes. Even the same phones can be loaded with personalized apps, photos, media, and cases. But, unfortunately, no one shares them, so everyone is alone with their individualized device. I have seen this sad scene far too many times: a family out at a restaurant, and each member, while sitting together, is intently manipulating their smartphones. And they do not appear to be communicating with each other.

There are now so many choices in the tech world and so few standards. Email used to be fairly standardized. Remember the AOL voice saying, "You've got mail." It was once so culturally universal that it was the title of a movie. Now there are so many email clients, web hosts, and types of devices to get mail on that everyone's email experience can be unique. I do not know if that is good or bad, but it is the direction most things are going. It is probably not hard to name five different ways of doing anything: listening to a podcast, viewing a movie, placing a voice call, or writing a document. Tech companies are just giving us what we want. More choices, more things we "need," more opportunities to buy their products and services. While there can be

dominant providers in the market, being dominant does not necessarily make them the best. With so many things to have and so many choices for each, how can anyone optimize their lives? What is the best photo editor? The best streaming service? The best smartphone? The best family car? The best internet provider? These are hard questions to answer as they are.

When you add "for me" to the end of each, it gets even more challenging. Do you spend so much time researching your choices that you never get to enjoy your things? By the time you have finished your research, is the item you chose out of date? Do you choose what your friends are using or what you have seen in commercials? Do you keep a suboptimal service because it is a hassle to change?

Our technology is much more powerful but also much more complex. At one time, you simply had to turn on the TV power switch to watch something. Now you may also have to select a signal source, app, or service, using a remote control with dozens of buttons on it. To drive a car, you unlocked the door, put the key in the ignition switch, turned it, put the transmission in gear, and drove. Now you may have a remote fob to unlock it, you may just press a button on the dash to start it (assuming the fob is near), and the pedal you press may inject more fuel into an internal combustion engine or may provide more current from a battery to an electric motor. One day you may just get in and tell the car where you want to go.

As our things become more and more complex, they sometimes do not do what we expect them to. Sometimes this is our fault, as we may not fully understand how to use them. For example, my parents have had to buy a new dishwasher and a new washing machine in the last year, and though the new items are more energy-efficient and do more things, they are more difficult for them to op-

erate. They bought a Samsung dishwasher with the controls on the top edge (rather than the face) of the door. This is confusing even to me. On their old dishwasher, you closed the door and set the controls to run it. You set it to run on this new one and then close the door, as the controls are inaccessible with the door closed. Their old clothes washer had a big knob on the panel to control it; the new one has buttons to move LED indicators to set modes. It does more but is more difficult to figure out how to set it.

Other times, our devices are so complex they do not operate stably and consistently. Unfortunately, what works today may not work the same tomorrow with our internet-connected devices, as updates change features, fix bugs, and introduce new bugs. We have many smart home devices in our house, including various Amazon Echo smart speakers and internet-connected light controllers of different brands and styles. I have been using the light device apps to turn on lights at certain times in the morning and then turn them off manually with our Echo Show in the kitchen. Recently I have been having problems controlling the lights through the Echo Show reliably. My wife uses the Show as a timer for cooking. Recently she has been setting timers, but the alarm never goes off. It seems like the Show got a bad update.

With all the choices and options available, tech means something different to each of us. We can tailor our devices and services to our preferences for experiences that are uniquely ours. If our devices do not act the way we want them to, it is unclear who is to blame or who will sympathize. ❖

**With all the changes and
choices in
technology, do we need
LACS more than ever?**

CREATE A 2022 CALENDAR

By John Krout

Presenter & Newsletter Contributor

Potomac Area Technology and Computer Society

<https://www.patacs.org>

jkrouit.apcug.presenter (at) gmail.com

INTRODUCTION

As I did for 2021, I have posted 2022 calendar files for downloading. The files are available for LibreOffice Impress and PowerPoint 365. You can add your photos and calendar events, change fonts, and generally customize as you like.

If you are not familiar with LibreOffice, it is a suite of office productivity apps that provide roughly the same functionality as Microsoft Office and is available for free downloading and use. Try it by downloading for Windows, Macintosh, and Linux at <https://www.libreoffice.org/>. If you like LibreOffice, then you can stop paying those Microsoft Office subscription fees.

There are two different calendar layouts. Initially, I prepared calendars for my use in a **full-page calendar layout**: photos for a month occupy one full 8.5×11-inch page, and the calendar for the month occupies another full page. The full-page layout calendar pages would be printed in Landscape orientation, and the photo(s) for February would be printed on the back of the calendar page for January.

I use comb binding; I bought a machine to punch binding holes in each page and insert a cylindrical plastic comb in those holes. In the illustration, you can see an example calendar with the white cylindrical comb teeth inserted in holes punched in the paper.



Starting in 2021, I also prepared calendar files in a **compact layout**; each calendar for the month occupies the lower half of an 8.5×11-inch page, and the photos occupy the top half of the same page. In addition, the Compact layout calendar pages would be printed in Portrait orientation.

If the difference between the two calendar formats is not clear to you, download each file for your software and compare them

The advantage of the compact format is savings in terms of paper and ink used. Typically, you would bind the compact format calendar pages at the top.

In each of the files, the area for photos is left blank. Additionally, each calendar month page is a Table, and each day is a cell in the Table. In each day-cell, you can enter event info for birthdays, anniversaries, and so forth. I have already added US Federal holidays.

HERE ARE THE HYPERLINKS TO THE 2022 CALENDAR FILES

[2022 PowerPoint 365 full-page calendar](#)

[2022 PowerPoint 365 compact calendar](#)

[2022 Impress full-page calendar](#)

[2022 Impress compact calendar](#)

I have already prepared the 2023 calendar files. I will remove the 2022 files at some point in 2023 and post the 2023 files. Therefore, the hyperlinks for the 2023 files will **not** be the same ones that are shown above. I will announce those hyperlinks later.

GLOSSY PAPER AVAILABILITY

I have been printing calendars on my HP DeskJet 7110 printer for the past few years using HP 2-sided glossy brochure paper.

When I last bought that paper in 2019, the cost was about 22 cents per sheet. The HP product ID is Q1987A. I still have about half of a package of that paper on hand, with the wrapper showing that product ID.

(Continued on page 17)

LACS NOTICES

WELCOME ALL

Gavin Faught, LACS
Treasurer

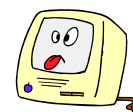
New Members (0)

Renewals (0)



Be sure to renew your LACS membership so you don't miss any of its benefits. Invite your family and friends to join. A member gets a free 3-month extension for each new member they bring in.

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.

HOW TO 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. It's highly recommended to join both lists.

- **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.

Email computer or technology-related questions or comments to all members on the LACSLIST to [lacslist \(at\) lacs.groups.io](mailto:lacslist@lacs.groups.io).

New members will receive one invitation to join each list; they must respond promptly or follow the above instructions.

If you have any problems or questions about joining the lists, please contact Stephanie Nordlinger: [nordlacs\(at\)aol.com](mailto:nordlacs(at)aol.com).

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, and email it with your changes to membership@lacspc.org or mail it to

LACS, 11664 National Blvd. #343,
Los Angeles, CA 90064-3802.

ATTENDING A ZOOM MEETING

LACS members should receive, via email, a link, Meeting ID, and Passcode 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.**

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**.
4. 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.

HYPERLINKS

Underlined text (blue in the colored editions) in User Friendly usually means it's a hyperlink to a website. Click on the link to see the reference.

LACS CALENDAR

**HAPPY
NEW YEAR**

LACS Board Meeting

Date: Monday, January 3, 2022 via Zoom

Time: 7:00 P.M. (Open from 6:30 P.M.)

Please arrive early so we can start on time.

Where: At your home or wherever you are

GENERAL MEETING

Date: Tuesday, January 11, 2022 via Zoom

Time: 7:00 P.M. (Open from 6:30 P.M.)

Please arrive early so we can start on time.

Where: At your home or wherever you are

January 1: New Years Day

January 17: Martin Luther King Day



VISIT OTHER COMPUTER USER GROUPS

Check out the URL below for information for visiting other user groups' Zoom meetings and for many 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

January 11: Two-Factor Authentication

Tips for Using YouTube

February 8: Ccleaner

March 8: Password Managers

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

ZOOM MEETINGS

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

Contact Leah Clark at leahjc@sbcglobal.net if you have any questions or if you don't receive the link by the morning of the meeting day.

Please enter before our meeting starting time in case problems need to be solved and to ask questions. We want

ZOOM RECORDINGS & PODCASTS

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

To listen to the podcasts of many of our past in-person general meetings, go to <https://www.lacspc.org/category/audio-files/>. Click on the session you want to hear.

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 top right.

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 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 that 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 leahjc@sbcglobal.net or call her at 424-261-6251.

More Quick Consultants, and more categories are always needed. Do we have anyone who can help with Google apps? 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 - 11
Anti Malware and Backup - 7, 8
Dragon Naturally Speaking - 3
Genealogy - 8
Groups.IO - 8
Hardware - 7

Lotus Word Pro, Approach - 7
Mozilla Firefox - 7
MS Excel - 8, 11, 12
MS Word - 1, 3, 8, 12
MS Outlook - 8, 1, 10
MS PowerPoint - 8, 11
MS Publisher - 2
Open Office - 6

Photoshop - 10
Quicken - 8, 12
Thunderbird - 7
Utilities - 7, 8
Visual Basic - 5
Websites - 5
Windows - 6, 7, 8
WordPerfect - 8
Zoom - 2, 9

Preferred Time for Phone Calls			
Number	Name	From	To
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	Ialongo, Gilbert	9:00 AM	5:00 PM
6	Johnson, Carol	10:00 AM	9:00 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 Berkorn, Paula	9:00 AM	5:00 PM
12	Wilder, Joan	9:00 AM	9:00 PM

OFFICERS, DIRECTORS AND LEADERS

TITLE	NAME	TERM
President	Leah Clark	2022
Past President	Stanley Johnson	2022
Vice President	Stephanie Nordlinger	2022
Secretary	Marcia Jacobs	2022
Treasurer	Gavin Faught	2022
Director	Sylvia Davis	2022
Director	Howard Krivoy	2022
Director	Mark Presky	2022
Director	Irv Hershman	2023
Director	Fred Kong	2023
Director	Annette Tossounian	2023
Director	Paula Van Berkom	2023
APCUG Rep.	Leah Clark	
Corporate Counsel	Stephanie Nordlinger	
CCSC Computer Lab	Loling Beckman	
Database Manager	Sylvia Davis	
Groups.IO 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: www.lacspc.org

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

Please use your roster for email addresses and phone numbers to contact any officer, board member or other member, or you may leave a message at the above number. If you don't have your roster, please contact Leah Clark at leahjc@sbcglobal.net and she will email you a copy. Only LACS members may receive a roster.

COMPLETE ROBOCALL DETERRENCE—PART 2 OF 3

**A two-step approach:
prevent the ring and convince the
robocaller that your line is disconnected.**

By John Krout

Presenter & Newsletter Contributor
Potomac Area Technology and Computer Society

<https://www.patacs.org>

jkrouit.apcug.presenter (at) gmail.com

INTRODUCTION

In Part 1 of this series, you learned how to configure your smartphone so that only your Contacts will ring your phone, a **Whitelist** strategy.

That Whitelist solution is not complete because robocaller systems can still find out that your phone is live simply by recognizing that the call went to your voicemail. And you continue to suffer the frequent voicemail inbox overload syndrome since many robocallers leave voicemails.

This part 2 article introduces the concept of including the **Special Information Tones** (SIT). The three tones beginning phone network messages, such as the number you dialed, are disconnected at the start of your voicemail greeting. After SIT, you can include your voice telling your Contacts that your number is indeed live, not disconnected, and they can leave a message.

WHY SIT?

Robocaller systems, like any valuable asset, are focused on the efficient use of system time. So, each robocaller system maintains an internal list of phone numbers known to be valid.

How can robocaller systems determine that a called number is not valid? When the phone number is disconnected, i.e., the system hears SIT. When robocaller systems hear SIT, the systems remove the number from their internal list of numbers known to be valid. Then, they do not call again.

The proof is in the pudding, as some say. In September 2019, I was receiving about 25 robocalls per week and roughly ten robocall voicemails per week. I implemented this SIT voicemail greeting strategy in July 2020. Between that time and March 2021, when I wrote this article, I typically received only two robocalls per week in Missed Calls, and my weekly robocall voicemails dropped to **zero**.

Why do I still receive *any* robocalls? First, because there are hundreds or perhaps thousands of robocall systems, some systems have yet to call and hear SIT.

CARRIER OPTIONS FOR VOICEMAIL GREETINGS

Typically, phone carrier companies, such as Verizon Wireless, AT&T, and T Mobil, offer three different ways to create a voicemail greeting.

1. **Automatically state your phone number**, for instance: You have reached 703-555-1111. Please leave a message after the beep.
2. **Play a recording of you pronouncing your name**, for instance: You have reached the phone of John Krout. Please leave a message after the beep.
3. **Play a recording of whatever you want to say** for your greeting.

So, our strategy will be to use the third option, a recording, to make robocaller systems think your phone line is disconnected. Most phones expect you to use the phone's microphone and your own voice to record that voicemail greeting.

Below, I will show you how to combine SIT and your greeting on your computer. In Part 3 of this article series, I will show you three ways to transfer that combined audio into your phone for use as a voicemail greeting.

HOW TO GET SIT

There are websites that curate phone network messages. I downloaded a couple of those messages and used the free Audacity

sound editor to isolate SIT and remove audio noise.

I have posted that cleaned-up SIT online as a monophonic WAV file on the Web. You can download it from:

<https://tinyurl.com/6n5hyb6d>

MAKE YOUR GREETING SCRIPT

Before recording, I suggest you type your voicemail greeting script in a document in a large font, so you can read it easily while recording.

Here is what I used as a script:

Hi, this is John. No, my number is not disconnected. Those tones were just meant to convince robocallers not to call me again. You can leave a message after the beep. Thanks.

RECORDING YOUR VOICE

No matter how you record, the phone carriers require that your custom voicemail greeting must be **monophonic, not stereo**. You can record monophonic or use Audacity to reduce the recording from stereo to monophonic.

One convenient way to record your voice is to use a voice recording app on your phone and then transfer that digital greeting audio file to the computer.

Android users can download any of several voice recording apps from the Google Play Store. Ensure the app documents are in the phone folder in which you can find the digital audio recording file for transfer to your computer. For example, **iPhone users** can find the Voice Memos app in the Accessories folder. Recordings can be transferred to the computer using iTunes sync.

Alternatively, if you obtained a computer microphone for virtual online meetings during the pandemic, or your laptop has a built-in microphone, you can record your voice directly to your computer using an application such as the free Audacity Audio Editor.

COMBINE SIT AND YOUR VOICE RECORDING

Audacity provides a convenient multi-track

method for doing this task.

STEP 1. Open Audacity, pull down the File menu and select **Open**. Then, using the standard Open File dialog box, load the

SIT recording. After you do that, the oscilloscope-like depiction of the SIT recording appears in an Audacity track, like that shown in **Illustration 1**.

STEP 2. In Audacity, pull down the File menu and select **Import**. Then, using the standard Open file dialog box, load the voice mail greeting recording.

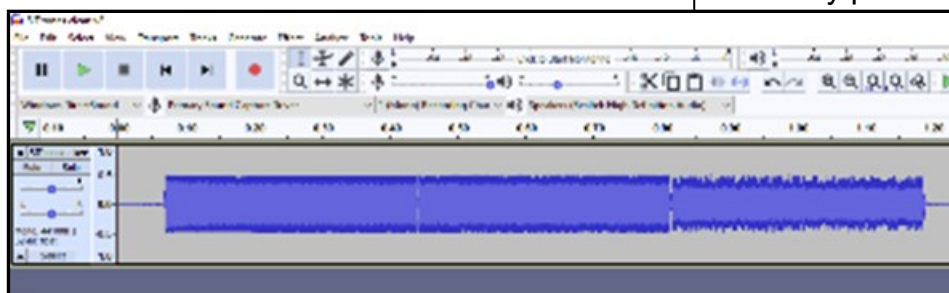


Illustration 1

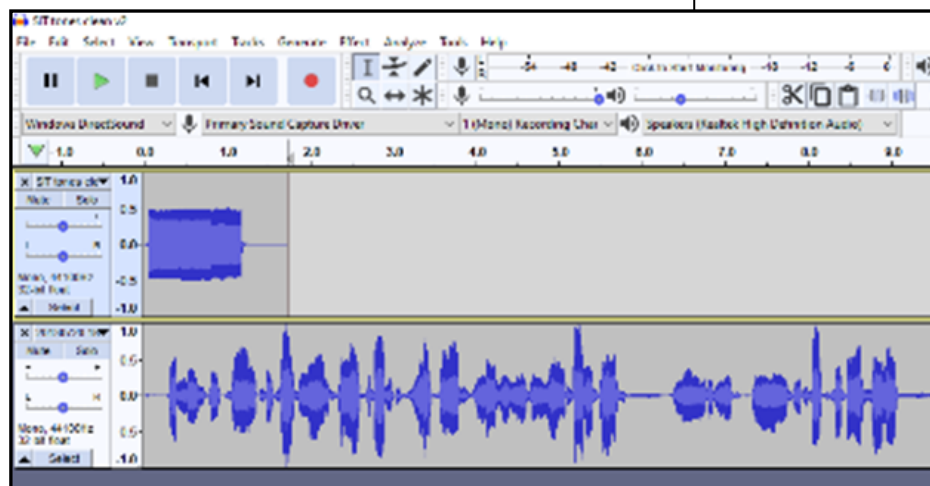


Illustration 2

Audacity places that imported voicemail greeting recording in a *second track*, below the track that contains the SIT recording. You can see an example in **Illustration 2**. (Page 13) Audacity adjusts the time scale so that the longer track is completely visible.

However, *both audio recordings start at the same time*. Therefore, we need to move the voicemail greeting recording to the right to start after SIT ends. Here is how to make that happen.

STEP 3. In the second track, click at the time point where SIT ends. A black vertical cursor will appear in the second track. Again, you can see an example in **Illustration 3**. In that illustration, the vertical cursor is circled in red.

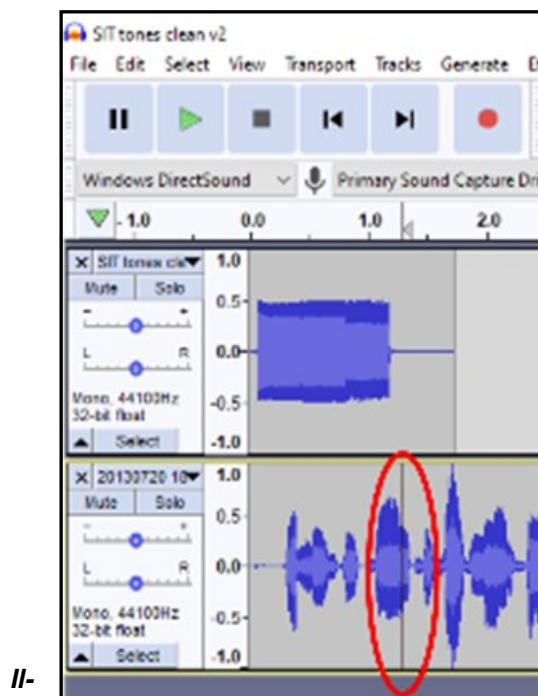


Illustration 3

STEP 4. Pull down the Tracks menu. In that menu, select **Align Tracks**.

A sub-menu appears. In that sub-menu select **Start to Cursor/Selection Start**. This choice means that the track in which the cursor appears will be moved to the right so that the audio starts at the cursor.

You can see the menus and choices in **Illustration 4**.

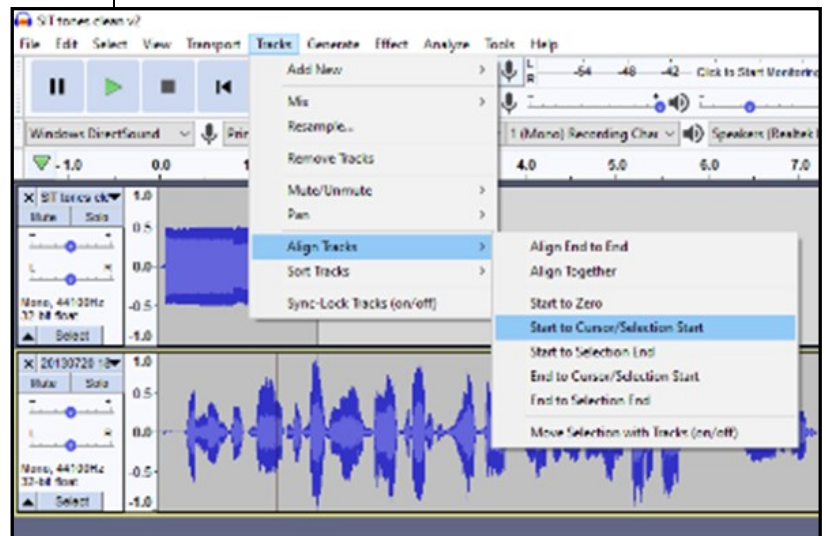


Illustration 4

Audacity moves the voicemail greetings in the second track to the right, to the point where you set the cursor. You can see an example in **Illustration 5**.

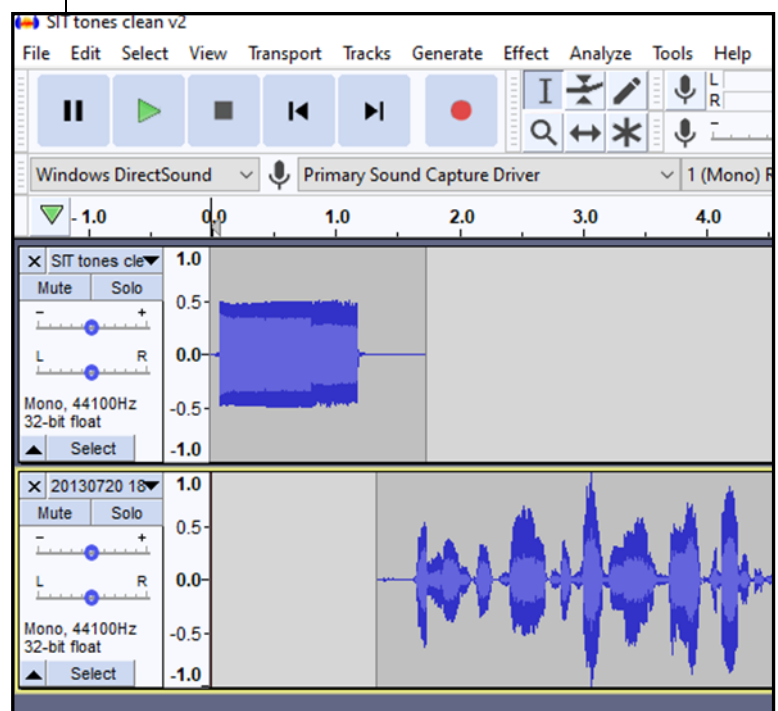


Illustration 5

At this point, your custom ringtone is ready to be **auditioned**. The play controls in Audacity

look like CD player or MP3 player controls, including a **Start at Beginning** button, a left-pointing black triangle with a vertical black bar, and a green triangular **Play button**. Those buttons appear in **Illustration 5**, just below the Audacity main menu bar where File and Tracks appear.

Click **Start at Beginning** and then **Play**. If you like the result, I strongly suggest you pull down the File menu and export the result to a WAV file as a backup.

If you do not already have Audacity installed on your computer, here is the download link:

<https://www.audacityteam.org/download/>

NEXT UP

In part 3 of this article series, you will learn how to transfer that combined greeting audio to your phone for recording as a voicemail greeting.

ABOUT THE AUTHOR: John Krout has been writing about creative uses of personal computers since the early 1980s, and more recently, about creative uses of smartphones. He finished a lengthy career as a software engineer with 14 years as a technical writer for a federal contractor. He lives in Arlington, Virginia, with his son, many computers and cameras, and too many cats. ❖

DESCRIBING THE QUANTITY OF COMPUTER STORAGE

By Joel Ewing, President
Bella Vista Computer Club
Bits & Bytes, June 2021
www.bvcomputerclub.org
president (at) bvcomputer-club.org



Computers can store data or information in several ways internally and on various media and storage devices. How we describe the

capacity of this storage has evolved considerably over the last 70 years, which explains some of the inconsistencies found in usage.

One of the first things one used to be taught in Physics, even in High School, was that a number representing a measurement was useless (and counted as an incorrect answer) if not accompanied by the appropriate unit of measure. The unit of measure (g, kg, lb, ft, m, km, etc.) was essential to define not only the true magnitude of the value but to distinguish among types of measure: weight, mass, force, energy, distance, charge, temperature, etc.

HOW WE GOT AMBIGUOUS COMPUTER STORAGE NOTATION

While all computers in common use today tend to have storage organized around the concept of a "Byte" or "character" containing 8 "bits" (base-2 binary digits), this was not always the case. Earlier computers had organizations based on decimal digits, on characters represented by less than 8 bits, on "words" containing some number of decimal digits (10), or on "words" containing some number of bits (12, 16, 32, 36, 48, 60).

For computers organized around decimal digits with memory locations addressed in decimal, one talked about memory having so many "K" digits or words of memory, where "K" was "1000" (no computers had enough memory yet for "M" to be an issue). If varying amounts of memory could be purchased, the physical memory sizes had to be manufactured in quantities that were round numbers in base-10. Machines with 20,000, 40,000, or 60,000 digit memory were described as 20K, 40K, or 60K machines.

Computers that were not organized around decimal digits addressed internal memory locations using a binary address¹, and this required that memory be manufactured in

¹An exception was some ingenious machines created at Moscow State University starting in 1958 ("Setun" and "Setun 70") based on the ternary (base-3) number system rather than binary. The ternary design required fewer discrete electronic components, a distinct advantage because of electronic component scarcities in the Soviet Union at that time. Soviet internal politics and software compatibility issues with the more-widely-adopted binary architectures caused the eventual demise of this architecture.

quantities that were round numbers in base-2. So you would have memory size increments of 1024 (2^{10}), 2048 (2×2^{10}), 4096 (4×2^{10}), 8192 (8×2^{10}), 16384 (16×2^{10}), etc.

Those that worked with such computers quickly tired of describing computer memory capacity in the cumbersome exact-decimal-value notation and adapted the shortcut of using $K=1024=2^{10}$ so the above round numbers in binary could be expressed more simply as 1K, 2K, 4K, 8K, 16K. This was particularly convenient since even if your mind subconsciously saw these values "in decimal," you would only be off by 2.4%. Note that although this is a convenient notation, it is a "corrupted" usage of "K," which is a prefix derived from the Greek word for "thousand."

Computer storage other than central internal storage was a different matter. Disk storage and tape storage capacities were based on state-of-the-art recording techniques, choice of physical media dimensions, and recording densities. These factors produced capacities that tended to not be nice round numbers in either binary or decimal. Changing the definition of "K" in this context provided no notational simplification, so in the context of disk and tape capacity, "K" continued to have its customary meaning of "1000".

As maximum available and affordable computer storage capacities increased, the above conventions were extended to include the prefixes of

- M (mega), meaning $10^6 = 1,000,000$
OR $2^{20} = 1,048,576$, depending on context
- G (giga), meaning $10^9 = 1,000,000,000$
OR $2^{30} = 1,073,741,824$, depending on context
- T (tera), meaning 10^{12} OR 2^{40} , depending on context.
- and so on, for prefixes for powers of 10^3 higher than 10^{12} .

Until the mid-1980s, the only people exposed to this prefix usage were the relatively small number of computer professionals who understood the conventions. The vast number of PCs and other computer devices that have become available over the last three decades have resulted in many computer users now being exposed to these conventions without the underlying knowledge of computer architecture to understand the context distinctions.

THE SOLUTION

To eliminate this decimal/binary ambiguity, in December 1998, the International Electrotechnical Commission (IEC) approved an International Standard for names and symbols for prefixes for binary multiples for use in the fields of data processing and data transmission. That standard is recognized by NIST (U.S. National Institute of Standards and Technology – formerly known as the US Bureau of Standards) and can be found at <https://physics.nist.gov/cuu/Units/binary.html>

By this standard, usages of prefixes K, M, G, and T where a power of 2^{10} is intended should be replaced by Ki, Mi, Gi, and Ti, respectively. These abbreviations correspond to **kilobinary**, **megabinary**, **gigabinary**, and **terabinary**, and are pronounced as "kibi," "mebi," "gibi," and "tebi." So, 16 GB of RAM for a PC should more correctly be called 16 GiB of RAM. This would be spoken as "16 gibibytes" and mean 16×2^{30} Bytes.

Getting people to adopt the newer non-ambiguous conventions has been a non-trivial exercise. After two decades, retail consumer hardware manufacturers are still frequently not observing it. You will find some computer software correctly using the new standards (system and file utilities in Linux), and some not (system and file utilities in Windows 10, which tends to report both RAM storage and Disk storage in "GiB," with both mislabeled as "GB"). That consumers are confused is evident when you see someone who erroneously believes that "GB" always

means 2^{30} for computers, or is just confused by Windows 10 misuse of "GB" complain that the capacity of his hard drive was exaggerated because he misinterpreted the manufacturers 500 GB to mean 500 GiB. I personally try to use the standard binary prefixes consistently where appropriate, both to avoid unnecessary ambiguity and to educate others about their existence.

If you are familiar with the conventions, it is clear when a retail PC advertises a RAM memory of "8 GB" that what they really mean is "8 GiB" because PCs use a computer architecture with binary memory addressing. It is similarly clear that a mechanical SATA Hard Drive advertising 1 TB of storage probably means it is close to, hopefully, a little over 1TB, and not 1 TiB, which would be 10% larger. Close but not exact because there is no reason a physical device with varying physical track lengths should hit a capacity with a nice round decimal number.

Now in the case of a "240 GB" SSD solid-state drive, I am not certain what value is intended. Since there is discrete solid-state memory under the covers, no doubt the base storage inside the unit is really 256 GiB. But there also has to be a programmed computer processor inside that is emulating a SATA hard drive, so out of that 256 GiB, some memory must be used for the hard drive controller program, and some space taken for buffers and other data storage required for the hard drive emulation, and perhaps some space kept in reserve just in case marginal performance or failures are detected in some blocks of the memory, like having hidden alternate tracks on a mechanical hard drive that can replace a failed physical track.

After deducting the overhead for the device emulation, which could leave either 240 GB or 240 GiB usable storage for the emulated hard drive. I suspect they would mean the lower 240 GB in keeping with mechanical hard drive capacity conventions, but I am not 100% sure.

It ought to be possible to get RAM and PC manufacturers to use the more correct GiB in place of GB for RAM capacity. Hard drive and SSD manufacturers should specify their approximate capacity in both GB and GiB as well as the actual exact Bytes. While the current GB values are conventional usage, you still have the problem with neophytes seeing only a GB value and thinking it should be interpreted as GiB.

Another sloppy usage that drives me to distraction is hearing or reading someone describing his computer storage or speed as so many "gigs." So, he has "billions." Billions of WHAT? "G" is only a quantity multiplier, not a unit of measure! Without the correct units, the number is meaningless. This misuse is particularly confusing in the area of data transmission speeds, where units of both "bits per second" and "Bytes per second" are in common use. ❖

CREATE A 2022 CALENDAR

Continued from page 7

Since I used most of my stock of that paper when I printed my 2021 calendar last year, and the remaining stock is not enough for my annual calendar production, I decided to go shopping online. Amazon sells HP 2-sided glossy brochure/flyer paper for \$39.61/150 sheet pack: 26 cents per sheet. Staples brand is \$33.98/150 sheet pack.

Note: for calendar printing purposes, stay away from any paper described as "trifold." HP, for instance, scores its trifold paper to enable easy folding. The score lines will be visible in any print you make.

About the author: *John Krout has been writing about creative uses of personal computers since the early 1980s. Now he also writes about smartphones, tablets, and digital cameras. He retired in 2021 after working as a federal contractor software engineer for 30+ years and lives in Arlington, VA, with his son, many computers, digital cameras, and too many cats.* ❖

JERE'S TECH TIPS

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LAUGHING OUT LOUD

- * Why is a computer so smart?
Because it listens to its mother board.
- * What do you call two monkeys sharing an Amazon account?
Prime mates.
- * The only thing good about "standards" in computer science is that there are so many to choose from.
- * Keyboard : Instrument used to enter errors into a computer.
- * Keyboard not connected, press to continue.
- * Unprecedented performance: Nothing ever ran this slow before.
- * Never say "OOPS!" Always say "Ah, Interesting!"
- * Programming is an unnatural act.
- * Justify my text? I'm sorry but it has no excuse.
- * Maintenance-free: When it breaks, it can't be fixed.
- * The generation of random numbers is too important to be left to chance.
- * Math problems? Call 1-800-[(10x)(ln(13e))]-[sin(xy)/2.362x]
- * Disc space, the final frontier!

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— **Free APCUG** (International Association of Technology and Computer User Groups) **Webinars**.

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— **Rewards** for recruiting; LACS will extend your membership for three months for each new regular member you recruit.

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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 start-time 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.