

Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and related technology. Our aim is to provide an exchange of information between users of digital devices. We are not in any way affiliated with any computer manufacturer or software company.

Program Meetings

No admission fee for non-members. Everyone is welcome! Second Tuesday of every month, except August, from 6:30pm – 9:00pm.

Help's Half Hour (Q & A)
6:30pm – 7:00pm. Members and Guests are welcome to attend and bring their computer related questions with them to get answered.

7:00 – 7:15, Club Business

7:15 – 8:30+, Main Presentation

Come and join in the fun and enjoy a snack! You are welcome to bring a friend.

Become a Member

Go to our website, www.rcsi.org, and download a printed form for use by the Post Office mail, or enter your info online and pay with a credit card or PayPal, or attend a meeting.

Monitor

The Monitor is published monthly by members of RCSI. Articles by our members may be reprinted by other user groups or nonprofits, without special permission, provided they are unaltered. A courtesy copy may be emailed to our author or Monitor editor.

The Rochester Computer Society, Inc. a computer/tech club open to everyone



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November 2019

Tuesday, November 12, 'Free Software for a Windows Computer', remotely by Francis Chao
'Gifts and Gadgets', by Arpad Kovacs

NO December meeting, see you January 14, 2020
Tuesday, December 10, dinner at St John's Meadows
5 pm, more details on page 13

Tuesday, January 14, Video Night

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Maryellen Amato,
M.D.

Andrew Cummins
Dave's Tips
RCSI editor

Ask Leo !

By Leo Notenboom, <https://askleo.com/>
Technology With Confidence
Making Technology Work For Everyone

Avoiding Tech Support Scams

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What do you do when you suddenly find yourself on the phone with a scammer? Step One: Be Skeptical!

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So imagine this: You are minding your business, and you get a phone call. Someone with a fairly heavy accent tells you that he's calling from



“Your Computer User Group of the Air”, Saturdays from 12:00 pm to 2:00 pm with Nick Francesco, Dave Enright, and Steve Rae. Broadcasting on JAZZ 90.1 FM from Rochester, NY. Call 966-JAZZ (585-966-5299) or 800-790-0415

The RCSI 'Monitor' newsletter can be found in some public libraries in Monroe County. *Free* copies can also be picked up at the following computer stores: Microworx, Just Solutions, TSC Electronics, and Pod Computers. Digital copies may be obtained from www.rcsi.org or my Pcloud storage at <https://tinyurl.com/tonydel-rcsi>. Also includes presentation slides and articles too large for this newsletter.

Some Past Presentations:

Cut the Cord, Streaming Services
Autonomous Cars and Robots
Open Source and Free Software
Protecting Your Identity
Keeping Mobile Devices Secure
3D Printing, ENABLE project
Flash Drives-Not Just for Storage
Features, Mac OS X & Windows
Tablets, the Programs and Uses
Personal Finance Software
Amazing Browser Tips
Linux is Like Cars
Close up Photography
Drones and Their Many Uses
Gifts and Gadgets for the Holidays
Video Night presentations

Windows, and they've detected that your computer is causing errors on the Internet, and he would like to help you resolve this problem.

He actually then walks you through accessing a couple of programs on your system that then shows you that indeed there are a bunch of errors being reported. He has a couple of options for you: Either you can pay a certain amount of money, and they will fix the problem for you, or he will ask you to give him remote access to your machine so that he can fix the problem for you.

If you accept either of these two scenarios, you've just been scammed. This is an increasingly effective and popular scam that many, many people are falling for, and that we need to make sure everybody is aware of to avoid. It's actually referred to as the “Tech Support Scam” although in reality there are several different flavors of how this interaction can actually happen.

I'll review each one of those and give you some steps you can take to not only determine that you're about to fall victim to a tech support scam but ways to avoid it, and of course, if you happen to find out that you have fallen for one of these scams, I'll also talk about the next steps you need to take to make sure that your information, your computer is safe.

One of the first questions people ask, of course, is why do the scammers actually even try this? And the answer as it turns out is incredibly simple. It's all about money. Now, it doesn't always show up as money directly out of your pocket, although it often does.

If they ask for your credit card number, well, they have your credit number, and now they can start using or abusing your credit card and making false charges. It's interesting in that typically that's not what necessarily happens. What often happens is that they will simply charge you a large amount (\$150, \$200) to fix a problem that in reality you don't have.

The other thing that happens, and this happens with increasing frequency is that using remote access to, under the guise of helping you or fixing your machine for you, they will instead install [malware](#). In fact, in the worst case, they could install [ransomware](#) which would effectively hold your machine ransom and encrypt all your data and make it inaccessible to you or anybody until you, then, pay them an exorbitant ransom to get it all back.

It's all about money. It always comes back to money. Be it in the form of malware; be it in the form of ransomware; be it in the form of stealing your credit card information, this is all about money.

But regardless of how the contact happens, I want to be very, very clear about something. These people are criminals. They are lying to you. Your machine does not have errors that they found on the Internet, for example.

They are simply trying to pressure you in several different ways to give over the information or the access that will allow them to do the malicious things that they have in mind. They lie. Don't forget that. Among other things, what that means is that there is no cause for you to try to be, say, polite.

They're criminals. They don't deserve your politeness. What they deserve is to be hung up on. What they really deserve is to be jailed, but you can, in fact, hang up on them. There's nothing wrong with that. So,

Special Interest Group

Linux Sig

The workshop is the **third Saturday of each month**, at Interlock Rochester, 1115 East Main St.

www.interlockroc.org

Enter through door #7 on the end of building, near *Comics Etc* and Goodman St. Find 'Interlock' on the intercom directory to get buzzed in and go upstairs to suite #200.



We have experts on hand to fix problems and answer questions about Linux and FOSS (free and open source software). Bring your system in so we can help you get the most out of it. Hope to see you there.

Free, Virtual Technology Conferences, ONLINE
presented by APCUG

2019 Schedule

Saturday: 11/2

For Conference Description
& Registration Links, go to
**[apcug2.org/category/
virtual-tech-conference](http://apcug2.org/category/virtual-tech-conference)**
from 1 – 4 pm, EST

let's talk for a minute about the three different ways that this scam takes place and what you need to do for each one.

The first and the most common is what we call the "Unsolicited Phone Call". You may in fact, have heard of it. It's the scenario that I started with. You get a phone call from someone you weren't expecting. They typically have a fairly heavy foreign accent and they're typically trying to convince you to either give them your credit card number or to give them remote access to your machine, so they can do whatever it is they want to do.

They will claim, up and down, that your machine is causing errors on the Internet or something like that. They will claim that they are from an official agency, be it Microsoft or Windows or your [ISP](#). In each one of those cases, all of these things are clues that they are not who they say they are.

Clue number one, they called you. The phone call was unexpected; it was not something you expected to have happen. Companies like Microsoft or your ISP or Yahoo or Gmail, they will not call you. Now, unfortunately, it turns out that some of the scammers have actually woven that fact into the dialogue, into the narrative that they use when they try to scam you.

They will tell you, "Microsoft, no we're not Microsoft; Microsoft will never call you." Again, that makes it sound like they're official because that's what people like me have been telling everybody. Microsoft will never call you. But then they screw it up. Then they give you another huge clue. One example, I'm from Windows.

You know what, there is no Windows. Windows is a program that runs on your machine. It is not an organization; it is not a group of people; it is not somebody or something that's going to call you. Windows is software on your machine. They got it wrong; that's a huge clue.

They've also been known to say, "I'm calling from your ISP." Where they literally say, "Your ISP". That's a clue. If they're calling from your ISP, they will tell you the name of the ISP you use, which actually leads into one of the really interesting effects or interesting clues as to how you know this is a scam. The person at the other end of the phone who just called you, without notice, without warning, doesn't know anything about you.

They have no idea who you are; they have no idea what computer you have; they have no idea who your ISP is; they don't know your name, in fact there's a really good chance they have no idea what phone number they just dialed because that was done by some robocalling equipment that just keeps dialing random phone numbers until somebody picks up.

Don't give them information. Make them give you information to prove that they are who they say they are. They will fail. They do not know you; they do not know who they are talking to; all they are doing is following a [script](#) to try and separate you from your money.

Then best thing, the single best thing you can do when you get an unsolicited phone call from some random organization, be it Microsoft or Windows or your ISP or something else? Hang up on them. Seriously. Hang up on them. You do not need to be polite. These are scammers who are trying to take your money.

If you are at all concerned, ask someone you trust for help. Is my computer causing errors on the Internet? How do I know that my

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Planning Meeting

Held on 1st Tuesday of each month
at 7 pm, at St. John's Meadows,
Briarwood building. ANY CLUB
MEMBER MAY ATTEND.

Newsletter Printing

The newsletter was printed at St
John's/Chestnut Court by the
printing group, with the help of
Don Wilder (computer and printer
operator). We will try and print on
the 1st or 2nd **Thursday morning**
following the monthly meeting.

computer isn't causing errors on the Internet? How do I know that this person that just called me isn't legitimate? People you trust are the people you should be reaching out to if you ever have a question like this.

Never, ever give out information to random people you don't know who called you first. So that leads us to the second way that this scam has been happening. As I said, the scam has been very successful in unfortunately, very many ways and the scammers know that we're starting to figure out that these random, unsolicited phone calls are random, unsolicited scam calls.

So they've moved on to other techniques. The second technique we'll talk about is the "[Pop-Up](#)". What you will suddenly get while you're visiting some random website is a [pop-up](#) on your screen that says, "Your computer is infected with malware. This-and-this is the case. Such-and-such are the results and call this number for help." Don't call that number.

Never, ever call the number or make the contact that is suggested by a pop-up message on your screen. Don't. Chances are, in fact there's a fairly high chance that message is itself a scam and the number that you call will connect you with the same people I was just talking about who are trying to call you to scam out of your money. If you call them, there's a very good chance they will say, "We can fix that for you. Let me have remote access to your machine. Give me your credit card number. It will only cost you a \$100 or \$150. Oh, and by the way, I'm going to do some things on your machine with remote access to make sure this doesn't happen again." The same scenario plays out. You've been scammed.

What they are really doing is taking your money and potentially leaving your computer with malware. If you get a pop-up like that, and they can look very legitimate, the big telltale is "call this number". Don't call this number.

But the point is they will never, ever tell you to contact a specific company or a specific person at a specific number. That number, when presented, is totally a scam. This error message – lies. The people that you would call – lie. Don't call that number.

So if you get a pop-up like that, what should you do? Close your browser. That's all you need to do. Chances are that message came from a website you're visiting. The message itself could be booby-trapped in such a way that all of the normal ways that you might close the message or make it go away, could cause bad things to happen. It could cause malware to get installed on your machine and that includes clicking the cancel button, could cause something to be downloaded.

Clicking the little "x" on the window itself could cause something to be downloaded. The safest thing to do is to close the browser you're using, be it Internet Explorer, Firefox, Chrome or whatever. The next safest thing to do? [Reboot](#) your machine. Shut your machine down. As long as you don't interact with that message that's threatening you or suggesting you call a phone number, that's the thing to do.

Make sure you don't interact with that message; the best way to make that message go away is to close the browser or to shut down your machine. After you've done that and you've got your machine back and running, yep, [scan for malware](#). Run an up-to-date scan. It's possible in case you did click on something that message had. It would be safest to scan for malware right then and there.

Programs recommended by our members

www.malwarebytes.com/adwcleaner/

AdwCleaner is one such specialty program. It does a superior job of rooting out rootkits, toolbars, PUPs (potentially unwanted programs), and browser hijackers. It finds malware traces left in the registry, temp files, and browser settings that can sometimes resurrect these pests when a machine is rebooted. Best of all, it's free and very easy to use.

AdwCleaner was created by a French firm called Xplode, but now is maintained by MalwareBytes. It's best to [download AdwCleaner directly from its support site](#) where you'll also find news and FAQs about AdwCleaner. But before you do, I recommend that you make a System Restore point, just in case you need to undo any of the changes AdwCleaner makes. (Click Start, then type **create a restore point** to begin the process.)

www.ccleaner.com

Award-winning PC Optimization. Trusted by millions and critically acclaimed, there's a reason why CCleaner is the world's favorite PC optimization tool! Easy to use, one-click cleaning so beginners can optimize their computers in seconds. Plus, it's packed with advanced features for power users.

Finally, like I said with the other scenario, if you're at all uncertain, you reach out to someone you trust and ask them for help. Don't respond to people that are reaching out to you. You be the one to reach out and ask for help. Ask them, is my machine compromised? Is there something going on? Should I be concerned? 99 times out of 100, you don't need to be concerned. As long as that message goes away, as long as you don't call the phone number on that message, you're fine. But, you want to be safe. Run malware scans, ask a friend for help if you're still uncertain.

The third approach that these scammers have taken to is a really, really interesting one and it actually leverages people's frustration and admittedly desperation at times when they're facing a problem with Windows or especially with free email services.

First, understand, Microsoft, for the most part, certainly Hotmail, Outlook.com, Yahoo, Gmail, all of these free email services and free other services, they do not offer live technical support. There is no number to call to actually speak to a person to get real help.

Now, the scammers rely on that because what they do is they then place ads that show up in search results when you search for things like "Hotmail help" or "Windows support" or "Gmail support". You'll find that the natural search results, the actual search results provided by the search engine will be presumably, legitimate, actual results for Google support, or Hotmail support or whatever and those will take you to legitimate sites. In other words, Google.com, Microsoft.com, Hotmail.com, Outlook.com, the domains and sites that you know and use every day.

But around those search results will be advertisements. These are advertisements that have been paid for by the scammers. They're paid to show up when you search for terms like, I'll just say Hotmail support. So what happens is these ads will suggest that you can call a phone number to get help to talk to a real person. Guess what? That real person is probably a scammer.

That real person is not associated with Hotmail or Microsoft or Yahoo or Google or any of these organizations. That person is probably in an overseas call center trying to come up with ways to take your money. They will run you through much of what I've already described. I can help you; give me remote access; give me your credit card number; let me – I can solve this problem for a charge.

It's all about separating you from your money, and possibly it's all about installing malware on your machine so that they can do more. So the short answer is, don't do that. Remember, in a case like this, even though these are advertisements showing up on a search results page, these are scammers; these are criminals; they lie.

They're all about separating you from your money. So what should you do? How do you avoid this problem? Well, for one thing, searching for something like Hotmail support, or Outlook support or Windows support is not particularly productive. You're not going to find out something that you don't already know. And what is it you already know? If you want support for Windows, you go to Microsoft.com. If you want support for Outlook.com, you go to Outlook.com. If you want support for Yahoo Mail, you go to Yahoo.com.

Jere's Tech Tips

By Jere Minich, Apcug Advisor,
Region 5 (AL, FL, GA, SC)

WHY WINDOWS SHIPPING THE LINUX KERNEL CHANGES EVERYTHING –

Microsoft is changing. Once a closed, monolithic organization with open hostility towards open sourced software, they now appear to be embracing it.

Along with some recent changes in attitude, including open sourcing Visual Studio Code, Windows are starting to embrace Linux. The Windows Subsystem for Linux (WSL) was an integrated virtual version of Linux within Windows.

A new version of WSL is on the way, and for some people, it's going to change everything! Read more of this Make Use Of article: <http://bit.ly/2JEqTaO>

HOW TO TRANSFER DATA FROM WINDOWS TO MAC (EASY-TO-FOLLOW GUIDE) –

Switching from Windows to Mac? Windows PC and Mac have many differences, especially in apps, operating system (of course) and user experience. If you have never used Apple computer before, you might need to adapt to Mac's keys, gestures, etc. But before you do that, there is something more important to do: transfer the data. This technobezz article will show you how to do just that. <http://bit.ly/302VmEU>

It's very simple; no search is required. Now, if you find that you do feel the need to search for help, please understand that there are ads on the search results page and understand how to distinguish those ads from the real search results. The real search results are where you should be paying your attention. The ads, especially in situations like this can be particularly distracting and particularly misleading making promises that simply can't be met.

Regardless how the engagement happens, be it with an unsolicited phone call to you, be it with a pop-up that requests you call a specific number or be it via an advertisement shown in the search results, don't engage. Just don't engage these people; don't call them; don't engage them on the phone; hang up on them if they call you. It's really that simple. If you need help, if you find yourself in a situation where you truly have issues with your computer, ask someone you already trust. Even if they then give you a recommendation for someone to call or someone to trust in their stead, that's fantastic; that's information; that's data from a trusted source.

But when you reach out to people that you've never heard of before or worse, when people you've never heard of before reach out to you, that's a bad sign. That's a scenario where you're very likely to get taken and to have your money taken from you. So, what if it's too late? What if one of these scenarios or something like it happened to you?

What if you answered the phone; you followed their instructions; you saw all these bogus error messages on your computer; you let them have remote access; you gave them a credit card number. What do you do? Well, it's actually fairly simple. Step 1, call your credit card company. Make sure that they understand exactly what's happened. You won't be the first because this is happening to a lot of people; they will know what to do.

Second, scan your machine for malware. There's no way to know what they did while they were connected remotely. There isn't. They could have done quite literally anything. Scan your machine for malware. Make sure you've got recent backups always, but at this point, after the fact, what you really want to do is make sure that you are performing extra, complete, full scans on your machine to make sure that they didn't leave something behind that they weren't supposed to.

And of course, if you're uncertain, shut down your computer, and get help from a trusted source, be it a friend, a neighbor, the local techie, a computer users' group, a seniors' group, a library, there are lots of different resources out there that can help you understand whether or not you really are at risk for whatever's happened to your machine or if there's nothing to be worried about at all.

Finally, if you discover that you have been scammed or even that someone made the attempt to scam you, I do recommend that you report it to your local authorities, to the appropriate authorities. In the United States, the FBI has resources specifically for this particular scenario; the so-called "Tech Support Scam" is very high on their radar. They are using these reports to actually go out and shut down a lot of the people and groups that are doing this. Just this week, before I'm recording this, there's a report that the FBI, along with their counterparts in India, actually stopped a similar scam that was actually calling people, cold-

Tidbits of probably useless information

Large Telescopes

The Gran Telescopio Canarias (GranTeCan) is perhaps the largest segmented primary mirror telescope in operation today. The entire GranTeCan project is supported by universities and institutes from more than one nation and is led by a Spanish astrophysical research institute IAC. Located in La Palma, Canary Islands, Spain.

Located at renowned McDonald Observatory in Texas, the Hobby-Eberly Telescope (HET) is currently the second largest optical telescope in the world with a usable optical aperture of 10 meters (its actual diameter is 11 m). Like most other large telescopes, HET's primary mirror is made-up of multiple small hexagonal segments, 91 to be exact. Located on Davis Mountain, Texas, The United States.

The famous twin telescope of W.M. Keck Observatory, situated on Mauna Kea, Hawaii, is among the most advanced telescopes in the world. The primary mirrors on both telescopes are 10 meters wide and are composed of 36 hexagonal segments.

They are equipped with state-of-the-art instruments, including a laser guide star adaptive optics. One of its instruments, the Deep Extragalactic Imaging Multi-Object Spectrograph (DEIMOS) can gather light from more than 130 galaxies in one single exposure.

calling people much like the Tech Support Scam, and threatening with government tax related issues.

It was all a scam but because of reports, because of the work they were able to do, they were able to actually locate these people and put a stop to this particular [network](#) of scammers. That same thing is possible, but it does require that we who have been scammed, report the scams; don't be embarrassed by it.

Like I said, many, many people are falling for this scam, and it's not something to be embarrassed about. What it is, something to do, is get educated; understand how this scam happens; learn to identify it and then if you are scammed, or if you know of someone has been scammed, take the extra time, the extra steps to report the scam to the appropriate authorities, so that we stand a better chance of putting these scammers back in their place.

I normally hesitate to ask people to share my videos because I figure the videos themselves will either be share worthy or not, it's really up to you. In this case, this issue is so incredibly important, I am going to take that extra step of asking you to share this video or the page on which this video is hosted, with people that you know who, let's just say, might be vulnerable to this kind of issue or people who have been scammed or groups that may be interested in learning more about this issue. It's an important one. Millions of dollars are being lost just because people are not aware of this particular scam and how this particular scam happens.

As always, I'd love to hear what you think. Let me know what you think about the approaches, about the solutions, if you've had an experience with a tech support scam, leave a comment on askleo.com. Here's the link to see this article on <https://askleo.com/avoiding-tech-support-scams/>. This is where all the comments are moderated and all the comments are read. I'd love to hear what you think. I hope that you haven't been scammed. I hope that this prevents you from falling for a scammer in the future but in the meantime, as always, have fun, stay safe and don't forget to [back up](#). I'll see you again soon.

###

Musings on Medicine and Computers

by Maryellen Amato, M.D.
Member, ICON Users Group, MO

When Mary Phillips asked if I would be willing to write an article for the ICON newsletter, I didn't want to say no, even though I was a newbie. After all, Mary had done so much for me. When I attended the Mercy Seniors' Computer Course last year, she sat next to me, guiding me on my journey into Windows 10 which I had never before used. She was forever patient and encouraging.

Mary also introduced me to the ICON meetings at our local libraries, and I soon joined ICON and tried to attend as many of the meetings as I could. Month after month I would observe Mary arriving early and staying late, lugging equipment and paperwork in and out of these meetings, using her time and skills as a top-notch teacher to lead and

Some Interesting Websites and Internet Finds

Interesting Internet Finds -
August 2019, by Steve Costello
scostello@sefcug.com

Trying to stay off your phone?

Turn the screen grayscale on/off,
<https://www.lifesavvy.com/5053/trying-to-stay-off-your-phone-turn-the-screen-grayscale/>.

A simple, yet effective way to avoid distraction. Since reading this, I set my phone to grayscale whenever I need to concentrate on something. Also, I put the phone in airplane mode.

Search smarter with the DuckDuckGo search engine

<https://www.askdaveytaylor.com/search-smarter-with-the-duckduckgo-search-engine/>

Are you using DuckDuckGo as your default search engine? You should be if you are serious about not having everything tracked. That said, searching with DuckDuckGo is a little different than searching with Google, Bing, etc. Dave Taylor explains how to search smartly with DuckDuckGo in this posting.

How to use a public computer safely

<https://www.online-tech-tips.com/computer-tips/how-to-use-a-public-computer-safely/>

We are in the travel season now, which makes it more likely you will be using a public computer. Read this post from a reminder of ways to keep safe while using one.

guide our group into new worlds of technology. From Mary as well as from our guest speakers, I learned about things ranging from genealogy to drones.

I did not want to admit to anyone that I had worked with computers for many years in a limited setting. You see, the computers that I used at the hospitals or out-patient facilities where I worked had already been purchased, set up, turned on, and preloaded with the programs and apps that we needed to use. In addition, there was a group of savvy computer information technologists at our beck and call if there was ever a question or problem.

So what can I, someone with somewhat “limited” computer experience, discuss in an article? That got me thinking. Since I am trying to cultivate an attitude of gratitude, I thought I would share my gratitude for computers in Medicine, which have changed all of our lives, mostly for the better.

When I started medical school in 1977 (Case Western Reserve University in Cleveland, Ohio), we had a refrigerated room full of large bulky computers tucked away somewhere, but we never worked with them. If I wanted to better understand something or look something up – in medical school or in my early years of medical practice – I had to make a mad dash to the medical library to search for a book that might have the information I might need. (...and I would be praying that book was not checked out!) As I progressed in my studies and years of experience as a diagnostic radiologist, my mad dashes became less frequent, but occasionally a disease we didn’t see too often or a pressing question caused me to hit the books. This was especially difficult when I was on call in the middle of the night, the only physician available, and was even worse if the medical library was locked. It was also very time consuming and took me away from my patients.

Voila! The biggest benefit of having a laptop or an iPhone connected to the Internet was that medical information was now at my fingertips. The mad dashes to the library became things of the past.

In addition, when I was on call at night, for most of my career, I would have to physically be present at the hospital or drive in from home at 3 a.m. or whatever ungodly time I was called. Now I could sit in front of a computer screen at my home and call up the x-ray images I needed to read. I did not even have to get out of my pajamas or bunny slippers to make the harrowing drive through fog, ice, and snow.

Computers also translated into great benefits in a number of other helpful ways. When I started my career, patient requisitions for imaging tests were written out by hand and had to make it down to the X-ray department. Imagine the frustration we felt when we got a requisition for a test “to be done TODAY” at 6 p.m., particularly noting the test was ordered at 1 p.m. Computers did away with these delays.

Our reports of completed tests also got out sooner. For many years, after interpreting an x-ray, I dictated my findings into a machine that was transcribed by a pool of transcriptionists. It sometimes took a couple of days for the report to be typed. Toward the latter part of my career, this time was chopped since we were now typing our own reports or using voice dictation algorithms. Signing a completed report was also much easier. Back in the day when each report was typed using carbon copies, if we altered a single word on the page (such as changing the

word left to right, a critical change), the entire report had to be retyped for just that one word and sent back to the typing pool. That might cause a delay of an additional few days. Now we could just pull up the reports on our computer monitors, make changes ourselves, push the button, and send the report on its way immediately.

The way that x-rays were taken and stored also evolved during my career due to computer technology. We went from using film (like film in your old camera, only bigger and heavier film) to using digital images that were quicker to acquire and easier to store and retrieve.

With our old-fashioned x-ray film, we had to take time to put the films up on lightboxes and take time to sort through dozens of old films in heavy folders to search for comparison views so we could assess for new or interval changes. Sometimes those old films were even stored in the bowels of the hospital and we had to wait hours to get them, delaying our final interpretation. Even worse, sometimes the old films were lost!

I had a ruler, a magnifying glass, and a “hot light” sitting next to me on my desk. My “hot light” was bolted down, but sometimes someone would “borrow” my ruler or magnifying glass and I would become irate. These tools are no longer needed since computers come with their own measuring and magnifying tools, and the background and intensity of images can be “dialed” up or down. This also slashed the need for radiologic technologists to re-take films if an image was over or underexposed. This translated into less radiation for the patient as well as great time savings.

Many computerized imaging studies which we use commonly today were also either not in existence or only being dreamt of in the 1970s. This includes the CT scanner, invented by British engineer Godfrey Hounsfield (a Nobel Prize winner that I had the privilege of meeting). The “C” in CT stands for computerized – and CT is shorthand for computerized tomography. This allows for making x-ray slices of body parts, improving our diagnostic capabilities. Without going into all the computer detail and physics involved, let me simply say that this was revolutionary. Diagnoses are now made more quickly, more accurately, and often with less pain for the patient because of CT and computers.

When I started my radiology residency in 1981 at Washington University, it took an entire hour to do a CT scan on a patient’s chest. This meant that the patient had to hold their breath multiple times and the images were more likely to be degraded by motion artifact. In addition, only a limited number of patients could be scanned in a day and there was a waiting list so we scanned into the night hours. Today, it only takes a matter of seconds or less to scan someone’s chest (or other body part), so it can be done on a single breath-hold. It actually takes longer to get the patient on and off the scanning table than it does to do the scan itself! This means quicker diagnoses and increased patient “throughput.”

Virtually all of our current imaging modalities are dependent on computers, ranging from digital mammography to MRI (magnetic resonance imaging).

I have just touched the tip of the iceberg here, but I think you get the idea. Computers in Medicine have been extraordinary and they are here to stay, unless they are replaced by another technology that is currently in someone’s imagination.

From the April 2019 issue, The ICON
Newsletter, www.iconusersgroup.org,
meamato76@gmail.com.

**Free, Virtual Technology Conference,
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For Conference Description
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Truth in Advertising

by Andrew Cummins, President
ICON Users Group, MO

I saw in a store PCs being sold which boasted of incredible amounts of system memory for their price, such as 24GB. Looking at the smaller print, that 24GB is 8GB of RAM plus 16GB of "Optane memory." Optane memory is just a small SSD to cache a large HDD. It gives the PC the performance similar to an SSD for not much more than the cost of a cheap HDD. Don't be confused by my jargon, and don't be fooled into thinking Optane is system memory, or RAM. At least Optane memory does what it does well and so shouldn't be avoided.

I'm really excited about LED lights, but if you go out to buy high-powered LED lights, they often are advertised with false wattages, such as 600 watts for something that actually uses 60 watts. Sometimes you can't even find the actual wattage used on the packaging. They want you to think you're getting more light for your money than you're actually getting. At least the power savings of LED lighting versus older technology is incredible, regardless of advertised power.

If you've ever checked with Windows to see how large your PC hard drive is, you've always been presented with a smaller number than the advertised capacity for your hard drive. Hard drive capacities are advertised with redefined terms to make them appear larger. At least it's not a large difference between advertised and actual capacity.

When you look into it, there's an incredible amount of misleading, if not false, advertising. It's not just the tech industry. Go buy a flowerpot and see if it's really the gallon capacity advertised. It's almost certainly smaller. At least pots are often sold by inches in diameter, a less abused measure of pot size.

If you want help finding something to buy, ask at your tech group meeting. I have people often asking more for buying advice. You can read user reviews online for advice. Make your decision on themes you find in comments, not on any one person's review. You can ask the salespeople for advice. Remember, salespeople are trying to sell you something, even if they don't have what's best for you. At least these days, technology is so advanced that you're still getting a great product in spite of dubious advertising.

From the August 2019 issue, The ICON Newsletter, www.iconusersgroup.org, andrewcummins@yahoo.com.

Dave's Computer Tips

Backup & Recovery Software

[Acronis True Image Home](#) – Do you value the data on your computer? Do you value your time? How much time will you spend recovering data and returning your computer to its original state after a hardware failure or software glitch? Acronis True Image is my #1 pick for backup software! True Image consistently creates backups 10-20% smaller than its competitors and doesn't require Microsoft's .Net framework to run, like Norton. True Image creates backups to internal drives, external drives, network drives, and directly to CD/DVD. If you value your data you need this program! Read my backup strategy [here](#).

[Macrium Reflect](#) – Create, save and restore entire disk images for free with Macrium Reflect. Features include: Excellent compression, Mountable images, Save to Network, USB, firewire drives and DVD. Linux based Rescue CD with Network access and full GUI.

[Aomei Backupper](#) – Easy to use free image-based backup solution. Full system backups. Scheduling. Cloning. Create bootable media, including disc and USB, for disaster recovery. Highly recommended.

[FBackup](#) – A free yet very simple and effective file backup program. Back up important files and folders to local, external (USB) or network drives. Back up to ZIP compressed file or exact copy. Includes scheduler, file filters, verification, password protection and more.

[CrashPlan](#) – Free automated backup to multiple locations. Use the Crashplan software to automatically encrypt your files and back up to external media, other computers on your network, or the computers of friends miles away. There is also a paid service available, which allows you to back up to Crashplan's servers that starts at \$1.50 per month if you choose to use it.

[iPhone Data Recovery](#) – Now with Primo iPhone Data Recovery, it's super easy to retrieve your lost or deleted photos and videos from Camera Roll, Photo Stream, and Photo Library – no matter you have backup or not, and no matter how you lose the pictures (system upgrade, jailbreak, accidental deletion, etc.). It lets you preview the photos in thumbnails and get them back with original quality. Here's a link to a recent DCT article: [Primo iPhone Data Recovery](#)

Check out Dave's website at <https://davescomputertips.com>.



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* * * * BITS and PIECES in the NEWS * * * *

Editor's Note: To continue reading the following articles, you may copy the long URL at the end of the article and enter it into a web browser or go to www.rcsi.org/newsletr.htm and click on the URL.

Signal Messenger Bug Lets Callers Auto-Connect Calls Without Receivers' Interaction

October 04, 2019 by [Swati Khandelwal](#)

Almost every application contains security vulnerabilities, some of which you may find today, but others would remain invisible until someone else finds and exploits them—which is the harsh reality of cybersecurity and its current state.

And when we say this, **Signal Private Messenger**—promoted as one of the most secure messengers in the world—isn't any exception.

Google Project Zero researcher Natalie Silvanovich discovered a logical vulnerability in the Signal messaging app for Android that could allow malicious caller to force a call to be answered at the receiver's end without requiring his/her interaction.

In other words, the flaw could be exploited to turn on the microphone of a targeted Signal user's device and listen to all surrounding conversations.

However, the Signal vulnerability can only be exploited if the receiver fails to answer an audio call over Signal, eventually forcing the incoming call to be automatically answered on the receiver's device.

For further reading, <https://thehackernews.com/2019/10/signal-messenger-bug.html>.

Stanford chemists develop 'infrared vision' for cancer immunotherapy

By Ker Than

A new technique employs a bright infrared light that can pass through millimeters of tissue to illuminate tumors deep inside the body.

Stanford chemists have developed a new deep-tissue imaging technique that can see beneath the skin of living subjects to illuminate buried tumors with unparalleled clarity.

In a new study [published](#) in the September 30 issue of the journal *Nature Biotechnology*, the researchers demonstrate how their technique can be used to predict the response of cancer patients to immunotherapy and to track their progress following treatment.

"We call this infrared vision for non-invasively peering into biological tissues," said study leader [Hongjie Dai](#), the J.G. Jackson and C.J. Wood Professor in Chemistry in Stanford's School of Humanities and Sciences.

The technique relies on nanoparticles containing the element erbium, which belongs to a class of so-called rare-earth minerals prized by chemists for their unique ability to glow in the infrared.

The team covered the nanoparticles in a chemically engineered coating that helps the particles dissolve in the bloodstream and also makes them less toxic and exit the body quicker. In addition, the coating provides anchoring points for molecules that act like guided missiles to locate and attach to specific proteins on cells.

Clearing the fog

Under a low-powered LED light, the erbium particles bask targeted tissues or even individual cells in a bright infrared glow that can be seen deeper and with finer resolution than conventional imaging techniques, the researchers say. "It is like seeing while driving on a highway before and after the fog evaporates on a winter day," said study co-first author Yeteng Zhong, a postdoctoral researcher in Dai's lab. "The combined imaging depth, molecular specificity and multiplicity, and spatial and temporal resolution are unattainable by previous techniques."

Read the rest at <https://news.stanford.edu/2019/10/03/infrared-vision-immunotherapy/>.

Report: Alabama hospitals pay hackers in ransomware attack

October 5, 2019

An Alabama hospital system that quit accepting new patients after a ransomware attack said Saturday it had gotten a key to unlock its computer systems.

A statement from DCH Health Systems didn't say how the three-[hospital](#) system got the information needed to unlock its data. But The Tuscaloosa News quoted spokesman Brad Fisher as saying the hospital system paid the attackers.

"For ongoing security reasons, we will be keeping confidential specific details about the investigation and our coordination with the attacker," Fisher told the newspaper.

The company stopped accepting new patients at its hospitals in Tuscaloosa, Northport and Fayette because of a [ransomware attack](#) that hit early Tuesday. New patients were sent to hospitals in Birmingham and Mississippi.

Hospitals will continue diverting all but the most critically ill patients through the weekend, the statement said.

The hospitals said hackers used the [ransomware](#) variant Ryuk to lock its files, but the hack didn't compromise the care of patients. Workers reverted to using paper files.

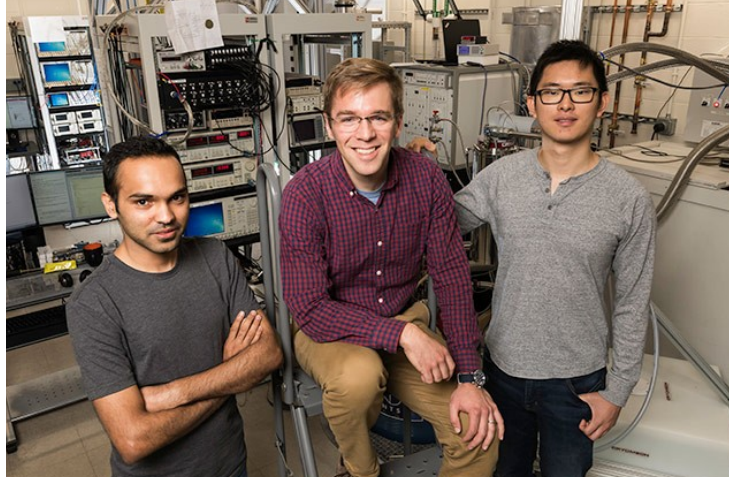
The three hospitals, which mostly serve west Alabama, have about 850 beds total and admitted more than 32,000 patients last year.

Continue reading about hacks into schools and local governments at <https://techxplore.com/news/2019-10-alabama-hospitals-hackers-ransomware.html>.

One small step for electrons, one giant leap for quantum computers

September 25, 2019

John Nichol and PhD students Yadav Kandel, left, and Haifeng Qiao, right, demonstrated a way to manipulate electrons and transmit information quantum-mechanically, bringing scientists one step closer to creating a fully functional quantum computer. Quantum computers will be able to perform complex calculations, factor extremely large numbers, and simulate the behaviors of atoms and particles at levels that classical computers cannot. (University of Rochester photo / J. Adam Fenster)



Quantum computing has the potential to revolutionize technology, medicine, and science by providing faster and more efficient processors, sensors, and communication devices.

But transferring information and correcting errors within a quantum system remains a challenge to making effective quantum computers.

In a paper in the journal *Nature*, researchers from Purdue University and the [University of Rochester](https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/), including [John Nichol](https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/), an assistant professor of physics, and Rochester PhD students Yadav P. Kandel and Haifeng Qiao, demonstrate their method of relaying information by transferring the state of electrons. The research brings scientists one step closer to creating fully functional quantum computers and is the latest example of Rochester's initiative to [better understand quantum behavior](https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/) and develop [novel quantum systems](https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/). The University recently received a \$4 million grant from the Department of Energy to [explore quantum materials](https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/).

Read more of this local research at <https://www.rochester.edu/newscenter/quantum-computers-transferring-electrons-397952/>.

* * * * CLUB & Regional NEWS * * * *

Rochester's Hackerspace, Interlock, www.interlockroc.org, is a non-profit organization that provides space for its members and the local community, to develop and share their interests in science, technology, art, and culture. This is the same place where the Linux SIG group meets every third Saturday of the month. The space is located at 1115 E Main St in Rochester. The membership includes programmers, info-sec experts, artists, makers, doers, dreamers and nerds. This organization is currently looking for new members, to help offset the rising cost of operating. Besides the Linux SIG, several other groups meet here, including Rochester 2600, TOOOL Rochester, and Adaspace (the female hackerspace).

Please help support their efforts to raise money to save Interlock Rochester. After 10 years of being in service, they are due for either a reboot or may have to shut their doors. They are doing a push now to find the next generation of members that are interested being part of a fun community as well as doing a fundraiser drive. You can donate and help save Rochester's Hackerspace by donating on their website.

Tuesday, December 10, Club Dinner, 5 p.m.

Call 429-9877 to register. **Please note the earlier time.**

The dinner will be in the same room where we hold our monthly meetings.

Our Meeting Place

St John's Meadows at Johnsarbor Drive, is on the left, past Clinton Avenue, when going West on Elmwood Ave. The opening in the white fence is Johnsarbor Drive. At the 'T', turn right. The meeting is in the first building on the left – **Briarwood**.

6:30 Help's Half Hour
7:00 Business
7:15 Main Presentation
Our meetings end between 8:30 and 9:00 pm.

Our meeting place can change. Please check our website before each meeting. www.rcsi.org

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Vol. 37, No. 11

Rochester, NY

November 2019

Tuesday, November 12, 'Free Software for a Windows Computer', remotely by Francis Chao
'Gifts and Gadgets', by Arpad Kovacs

NO December meeting, see you January 14, 2020
Tuesday, December 10, dinner at St John's Meadows
5 pm, more details on page 13

Tuesday, January 14, Video Night

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