



An International
Association of Technology
& Computer User Groups

Our Club

RCSI is a nonprofit 501(c)(3) group open for membership to anyone interested in computers and new technology.

Established in 1981, 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, and ***we do not sell your data or email address.***

Program Meetings

No admission fee for non-members. Everyone is welcome! Second Tuesday of every month, ***except July and August***, from 6:30pm-8:30pm.

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. Yes, you may bring the problem computer with you.*

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 guest.**

Become a Member

The club would like to have you as a member, and your subscription will help to keep us going. 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.

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



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**Oct 10, 'Cybersecurity from A to Z - 2023',
annual security presentation by Bob Gosticha, via Zoom**

**Nov 14, 'Youtube, an Introduction',
by Rob Truman, via Zoom**

Dec 12, TBD, Arpad Kovacs

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6 Tips to Help You Spot and Avoid Financial Scams

from Brandpoint

Technology can make life convenient, especially with mobile phones that help us stay connected on-the-go. Unfortunately, today's scammers are becoming increasingly sophisticated, making it more difficult to spot suspicious emails, calls or texts. But the good news is there are ways to identify the red flags of a potential scam if you know what to look for and understand the right steps to take - or not to take - when you suspect you're being scammed.

Once you've learned about these techniques make sure to share the information with your friends and family - especially those who may be more vulnerable to these kinds of scams. For instance, start a conversation with older and younger adults who may be more trusting of digital technology.



"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 (WGMC) from Rochester, NY.

Call 966-JAZZ (585-966-5299) or 800-790-0415,

www.jazz901.org

Sound Bytes is the longest running computer call-in show in the known universe.

We have stopped printing the Monitor newsletter.

Digital copies can be emailed or obtained from www.rcsi.org or my Pcloud storage at <https://tinyurl.com/tonydel-rcsi> (this link works in PDF version only). Also includes presentation slides, **past newsletters dating back to 1996** and articles too large for this newsletter.

Some Past Presentations:

- Autonomous Cars and Robots
- Open Source and Free Software
- Protecting Your Identity
- Tablets, the Programs and Uses
- Personal Finance Software
- Amazing Browser Tips
- Linux is Like Cars
- Drones and Their Many Uses
- Gifts and Gadgets for the Holidays
- Cut the Cord, Streaming Services
- 3D Printing, ENABLE project
- Features, Mac OS X & Windows
- The New Space Race, 2021
- Tech of South America
- Internet Security and Privacy
- AI and Digital Assistants
- Emerging Technologies
- My Favorite Android Apps

Here are tips to help you and your loved ones be on guard against scammers from the security experts at Bank of America.

1. Didn't expect it? Don't click it.

Be wary of any message that's unexpected - no matter who or what company it's from - especially if it's about something like a "problem with your account," "confirmation of an order," "difficulty delivering a package" or a "virus on your computer." These messages may come by phone, email, text, direct message or pop-up with a request for personal information or money.

Rule of thumb: Never click on a link or open an attachment from any institution or individual unless you were expecting it. If you think the message could be legitimate, take a moment and find the contact information on the company website and then reach out to the institution or person directly and ask if the email, text or call came from them. If not, simply delete it.

2. Be wary of requests that pressure you to act immediately.

Watch out for messages that pressure you to act immediately. If a familiar company or someone you know comes to you with an alarming "emergency" or "problem" where time is of the essence, take a breath and recognize that this urgency may be a scam. Scammers know if they can get your emotions or adrenaline high that you're less likely to think rationally. And don't just trust caller ID to confirm who's calling since numbers and voices can be easily spoofed or imitated. Even if it seems to be from a relative or friend, call that person directly at the number you've always used to contact them in the past to confirm if the message indeed came from them.

3. Asked to pay in an unusual way? Stop and assess the situation.

Scammers often ask for a payment method that can't be traced or rescinded, such as through a bitcoin, prepaid debit cards or gift cards - this is a major red flag. If you're asked to provide payment in an unusual way, stop and assess if this may be a scam. Financial institutions will never ask you to transfer money to anyone, including yourself, and will never ask you to transfer money because of possible fraud on your account.

4. When in doubt, don't give it out.

It's crucial to safeguard your personal and financial information. Be wary if you are asked to provide personal or account information. Keep in mind that a financial institution such as Bank of America will never contact you via phone, text or email to request personal information or an account verification code. Never provide this information to anyone unless it was you who initiated the call to the company.

5. Tempted to "get rich quick?" Trust your gut.

If you receive an offer for a free product, trip, or other "get rich quick" opportunity that seems too good to be true, trust your instincts. If something sounds too good to be true, it probably is.

APCUG, An International
Association of Technology and
Computer User Groups

<https://apcug2.org/>

Saturday Safaris

Exploring Technology in Depth
Saturdays:
12 pm – 2 pm EST

<https://apcug2.org/saturday-safaris/>

Tech for Seniors

[https://
www.techforsenior.com](https://www.techforsenior.com)

hosted by Ron Brown
and Hewie Poplock

Every Monday from 9-10 AM PT,
(12-1 PM ET)

Broadcast with Zoom

The meeting ID is **526-610-331**
(there is no password) and you'll
be placed in a waiting room and
then admitted.

#

APCUG Website Help

Windows & Android Tips:

By Judy Taylour

[https://apcug2.org/
jerestips/](https://apcug2.org/jerestips/)

Apple Tech Tips:

[https://apcug2.org/50-best-
mac-tips-tricks-timesavers/](https://apcug2.org/50-best-mac-tips-tricks-timesavers/)

Penguin Platform (Linux):

[https://apcug2.org/
penguin-platform/](https://apcug2.org/penguin-platform/)

Chromebook Tips And Tricks:

[https://apcug2.org/
chromebook-tips-and-
tricks/](https://apcug2.org/chromebook-tips-and-tricks/)

Also, never cash a check for someone you don't know personally even if they claim they will pay you extra for the favor. If you authorize a transfer or send money to a scammer, it can be very difficult for you to get your money back.

6. Take your security to the next level.

Use up-to-date technology to avoid falling victim to scams. You can help protect your online accounts by always using features like two-factor authentication, which makes your accounts harder to access, and activity alerts that keep you updated on what's going on with your account.

Unsure how safe your accounts are? Check if your bank offers security tools to help you. The Bank of America Security Center brings together security features and tools as well as fraud and scam education, making it easy to get the latest info and protect yourself. Security Center in Mobile and Online Banking also includes a security meter that shows you the level of protection of your accounts and information.

This article was reprinted from

[https://www.brandpointcontent.com/article/41585/6-tips-to-help-you-spot-and-avoid-financial-scams.](https://www.brandpointcontent.com/article/41585/6-tips-to-help-you-spot-and-avoid-financial-scams)

Modern-Day Bonnie and Clydes Are Trying To Steal Your Identity and Your Money

By Kurt Jefferson, Editor
Central Kentucky Computer Society

I've written in the past that if Bonnie and Clyde were alive today, they definitely wouldn't waste time robbing banks. If you're not familiar with the couple, they were ruthless gangsters who robbed banks, stores, and other places of business and killed lawmen, shopkeepers, and owners of cars they were stealing in at least four states.

They were, perhaps, best known for robbing more than a dozen banks— some of the same banks twice—over a four-year period, primarily in Missouri, Oklahoma, New Mexico, and Texas. Back in their heyday, they also targeted stores in small towns and funeral homes located in rural areas. Make no mistake about it. They were dangerous lawbreakers. That was how it was in the Depression-era 1930s.

Fast forward to today. Modern Bonnie and Clydes don't rob banks. It's too much work. Instead, they steal personal data from computers, phones, and tablets. They're called hackers. One of their main goals in this life is to steal, rob, and gain access to your hard-earned dollars. Their goal is to grab your money and run; your goal is to keep that from happening. So, whether you're tech-savvy or not, how in the world are you supposed to keep this from happening? There are simple steps you can take.

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Got Questions?:

Windows: Arpad Kovacs
podcomputer@gmail.com

Linux & some Mac:
Carl Schmidtman
unixgeek@faultline.com

Planning Meeting

Held on 1st Tuesday of each month at 7 pm, * * ONLINE * *. We will be using [Jitsi Meet](#). ANY CLUB MEMBER MAY ATTEND.

Monitor Newsletter

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. A courtesy copy may be emailed to the author or Monitor editor. Limited copies (probably in black and white) will be printed and available at our meetings.

Club Mailing Address

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Rochester, NY 14618

1. When someone calls you on the phone from an unknown number, DO NOT answer the phone; wait for a voicemail message. Microsoft, Apple, etc., will not call you. These thugs want to get their hands inside your computer or other device to steal your passwords or personal information. If you answer the phone, your number may be sold for more money.

2. Don't open emails from unknown sources. Don't open attachments from unknown senders. Don't respond to schemes alerting you that a friend has been hurt in London, Paris, Sydney, or some other location. Could you send money to help them? Your friend is in the hospital and needs your financial help. Their wallet's been stolen. Their purse has been snatched. And I'm the king of Spain.

Please don't fall for it. Don't click on links in an email from someone you don't usually hear from, urging you to view these great photos. There are no photos. Once you click on the link, malware infects your Windows PC and sends emails to everyone in your address book with the same message, urging them to click on a link to view photos. Phishing is the most successful cybercrime in America.

There were nearly 324,000 victims last year alone. (Phishing refers to an email that appears to be from a legitimate company or organization. There's often a threat – your account will be closed, or the sheriff will come to your house unless you respond. It's all bogus. But plenty of Americans fall for it). Ever gotten an email that you owe \$500 for Norton 360 (virus and malware protection software) that you never even purchased? You'd be surprised by how many folks respond to the email and even pay for the software they don't own. The thugs sending the email are not from Norton. Most junk email trying to get into your wallet originates in Russia, Germany, the U.S., and China.

3. Yes, it's a pain. But what tech folks call two-factor authentication can save your bacon. Turn it on. You'll be blocked if you decide to change your Gmail password, Facebook log-in, iCloud username or password, or some other account, you'll be blocked. You must enter a code you receive in a text message, an email, or even using the Gmail app on your smartphone to get permission to change your password. Yes, as I said, it's a pain. But it's preventing crooks from gaining access to your account. So instead of just changing your passwords, you must first receive a code and enter it into a website or Gmail app. That proves you are who you say you are.

4. Run antivirus software.

For Windows PCs:

Safety Detectives: The Best Windows Antivirus
<https://www.safetydetectives.com/>

PC Mag: The Best Antivirus Software for 2023

<https://www.pcmag.com/picks/the-best-antivirus-protection>

For Macs:

Safety Detectives: Ten Best Antiviruses for Mac in 2023

Tidbits of probably
useless information
I did not verify any of these.

Did you know:

Birds can do some pretty amazing things. For example, frigate birds can sleep while flying. That's because they can snooze while using only one hemisphere of the brain at a time, according to a 2016 study published in the journal [Nature Communications](#).

Jupiter is more than one and a half times as massive as all the other planets combined, but if Earth were the size of a grape, Jupiter would be the size of a basketball, according to [NASA](#).

While many other languages include written accents throughout their alphabets, English only has two letters that include a "diacritic dot," according to [Dictionary.com](#). That small mark you make over a lowercase "i" and a lowercase "j" is called a "**titlle**". It's likely a combination of the words "tiny" and "little" since it is an itty-bitty dot.

Research out of [Harvard University](#) in 2008 confirmed that the **Tyrannosaurus Rex** shared more of its genetic makeup with ostriches and chickens than with alligators and crocodiles.

Blood vessels are incredibly small, measuring around five micrometers (for reference, a strand of our hair is about 17 micrometers). If you laid them out in a single row, a child's blood vessels would stretch more than 60,000 miles, while an adult's would measure around 100,000 miles long.

<https://www.safetymdetectives.com/best-antivirus/mac/>

Macworld: Best Mac Antivirus Software 2023

<https://www.macworld.com/article/668850/best-mac-antivirus-software.html>

For Linux:

Safety Detectives: Five Best Antiviruses for Linux in 2023

<https://www.safetymdetectives.com/best-antivirus/linux/>

Ubuntu Pit: Top 15 Best Linux Antivirus Programs in 2023

<https://www.ubuntupit.com/best-linux-antivirus-top-reviewed-compared/>

5. Don't go on a fishing expedition on the Web. The World Wide Web is remarkable. It's the best library in the world. There are an estimated 1.6 to 1.9 BILLION websites currently accessible. Less than 400 million are currently active. More than 51% of all people in the world are online. Asia accounts for half the Internet traffic worldwide. Talk about diversity. Websites appear in more than 200 languages. But watch your step. Don't put your foot into horse dung. Make sure the website you visit starts with https. No, this is not always possible.

Some websites refuse to use the "https:" system. The "s" stands for secure. You're accessing a secure website. Don't randomly visit online gambling websites, sites with outdated addresses, websites with shortened addresses, sites ending in .onion, torrent websites (file sharing sites), porn sites and others.

Google constantly scans websites, looking for legitimate websites that have been compromised, unsafe sites, or other questionable pages. If you wonder whether a website is safe or not, visit the web address below and paste your website into Google's Safe Browsing website:

<https://transparencyreport.google.com/safe-browsing/search>

It will tell you whether it's safe to proceed or not.

6. Use a well-regarded virtual private network (VPN). This tool sends your Internet signal through a tunnel so that hackers and other thieves cannot access the web pages you visit, your email, your passwords, or additional private information. Do your homework. Find a good VPN you can afford.

Steer away from free VPNs because many sell your data online, bombard you with ads, and some even use your computer's processing power.

For Windows PCs:

Privacy Savvy: Five Best VPNs for Privacy

<https://privacysavvy.com/vpn/best/windows/>

VPN Reports: Best of the Best VPNs

<https://www.vpnreports.com/best-vpn/windows/>

For Macs:

GOOGLE JUST MADE LIFE MUCH EASIER FOR WINDOWS 11 USERS WITH ANDROID PHONES

– Windows 11 (and 10) users can now easily share files between their Android devices and Windows PC, thanks to Google's Nearby Share app which has been officially released for Microsoft's desktop operating systems. Read more at [Google just made life much easier for Windows 11 users with Android phones | TechRadar](https://www.techradar.com/news/google-just-made-life-much-easier-for-windows-11-users-with-android-phones).

WHAT YOU SHOULD (AND SHOULDN'T) UNPLUG OR TURN OFF WHEN YOU GO ON VACATION

– From saving money on your electric bill to protecting sensitive electronics from damage, there are plenty of good reasons to unplug things when you go on vacation. Read this How-to-Geek article about what you should shut down, what you shouldn't, and when. [What You Should \(and Shouldn't\) Unplug or Turn Off When You Go On Vacation \(howtogeek.com\)](https://www.howtogeek.com/780233/best-password-manager/).

13 THINGS YOU SHOULD DO AFTER PLUGGING IN YOUR NEW ROUTER

– You just plugged in your new Wi-Fi router. Now what? It's a perfect time to set things up with best practices right from the start and get the most out of your faster, better, and up-to-date hardware. How-To Geek [13 Things You Should Do After Plugging In Your New Router \(howtogeek.com\)](https://www.howtogeek.com/780233/best-password-manager/).

VPN Reports: Best VPNs for Mac in 2023
<https://www.vpnreports.com/best-vpn/mac/>

Safety Detectives: Ten Best VPNs For Mac
<https://www.safetymagazine.com/best-vpns/mac/>

For Linux PCs:
Safety Detectives: Five Best Linux VPNs
<https://www.safetymagazine.com/blog/best-linux-vpns/>

Pro Privacy: Ten Best VPNs for Linux
<https://proprivacy.com/vpn/comparison/best-linux-vpn>

7. Use a password manager to track your passwords and log in to many websites requiring a username and password automatically. Experts say this is smarter than allowing your browser to remember your passwords. Unfortunately, web browsers are not really safe to keep that sort of information. As Tom's Guide writes, "That's because desktop web browsers, despite their best efforts, tend to do a lousy job of safeguarding your passwords, credit card numbers, and personal details, such as your name and address. As a result, web browsers are fairly easy to break into, and lots of malware, browser extensions, and even honest software can extract sensitive information from them."

Here are websites where you can read about the best password managers and pick one that works for you:

PC Mag: <https://www.pcmag.com/picks/the-best-password-managers>

Tom's Guide: <https://www.tomsguide.com/us/best-password-managers-review-3785.html>

How To Geek: <https://www.howtogeek.com/780233/best-password-manager/>

Reprinted from the Central Kentucky Computer Society,
<https://ckcs.org/> , lextown2@gmail.com.

* * * * * SOFTWARE and HARDWARE * * * * *

A Conversation with BARD

Art Gresham, Editor
Under the Computer Hood User Group

Two months ago, I published two related articles in the March Drive Light. The first titled "What is ChatGPT and why does it matter?" which briefly introduced the chatbot that had recently been released from OpenAI (<https://openai.com/api/>). That was followed by an article about a subject with which I am quite familiar as an Electrical Engineer (BE EECS).

Scams

You might be ignoring your best tool to protect you against scams because it's too annoying — even though it only takes a minute or two out of your day. "Everybody hates **multi-factor authentication**," cybersecurity expert and former government hacker Kyle Hanslovan tells CNBC Make It.

Multi-factor authentication, which simply adds an extra step to the log-in process — like when your bank sends you a text or email before verifying your identity — is "the single biggest thing you can do" to deter hackers, Hanslovan says.

[Employment scams](#) use enticing, and hard-to-detect, lures to target people who've been out of work. Some scammers take a slow approach with interviews and a legitimate-seeming operation. They then collect personal information from your employment forms, or tell you to buy equipment or training.

Other scams get right to the point and promise guaranteed or easy income—if you purchase their program. Sometimes, a fake employer sends a large paycheck and asks you to send the "extra" back—a play on the popular overpayment scam.

You may also see job opportunities that involve receiving money and sending funds to another account, or receiving and reshipping packages. These "money mule" and "reshipping mule" jobs are often part of an illegal operation, and you could be personally liable.

From www.experian.com.

The second article is "What is Electricity? (Hint, the answer is not what you think)". The initial implication one might get upon starting to read this article with My name as the byline is that I had written about a subject I am familiar with. And I stated I had found the answers to some basic questions. However, as I conclude at the end, the content of these answers was NOT written by me, but by an AI Chat Bot from OpenAI.

Many other AI systems exist, with more being made available, evolving, and moving into new areas of application. The 60 Minutes (CBS) story "The Revolution" <https://youtu.be/TUCnsS72Q9s> introduced what is going on at GOOGLE. Their chatbot is named BARD.

So I signed up for access and asked Bard the same questions. The results are shown below, unedited. I find them to be quite similar to ChatGPT, as they should when providing factual answers to scientific questions. Equally as accurate, although some are less 'chatty', or perhaps slightly less complete. (<https://bard.google.com/signup>)

What caused the failure of the first trans-Atlantic telegraph cable?

BARD's Response:

The first transatlantic telegraph cable failed for a number of reasons, including:

- **Mechanical problems:** The cable was made of a copper wire surrounded by gutta-percha insulation, which was then wrapped in hemp and iron wire. The cable was very heavy and difficult to handle, and it was prone to breaking.
- **Electrical problems:** The cable was not insulated well enough to withstand the high voltages that were used to transmit signals. This caused the insulation to break down, which led to short circuits.
- **Environmental factors:** The cable was exposed to a variety of environmental factors, including salt water, which corroded the copper wire and the insulation.
- The failure of the first transatlantic telegraph cable was a major setback, but it paved the way for the successful laying of subsequent cables. Today, transatlantic cables are an essential part of the global communications infrastructure.

Is electricity actually an EMF wave or movement of electrons?

Electricity is both an EMF wave and the movement of electrons. An EMF wave is a disturbance in the electric and magnetic fields that propagates at the speed of light. When an EMF wave passes through a conductor, it causes the electrons in the conductor to move. This movement of electrons is what we call an electric current.

In everyday electrical and electronic devices, the signals travel as electromagnetic waves typically at 50%–99% of the speed of light in vacuum, while the electrons themselves move much more slowly; see

Virtual Tours

Mayan Ruins of Tikal, Guatemala - at first glance, the Mayan Ruins of Tikal appears to be quite similar to the ruins of Chichen Itza. They were both major cities in the history of the Mayan civilization and are both declared UNESCO World Heritage Sites.

The biggest difference between the two is that Tikal is less visited and often less crowded compared to the more popular Chichen Itza. That's because Tikal is located in the remote Guatemalan forests whereas Chichen Itza is much easier to access.

Some areas of Tikal remain unmapped or excavated too. So if you love hidden gems, make sure you visit the [Mayan Ruins of Tikal](#), even if it's only by virtual tour for now.

Easter Island, Chile - Easter Island is a Chilean island in the south Pacific Ocean. It's famous for its 900+ giant statues known as Moais, which are scattered around the entire island.

It is believed that the Rapa Nui natives built these Moais to honour chieftains and important individuals from their village. They believed that by doing this, the spirit of the person would forever watch over the tribe and bring good fortune.

Today, Easter Island is believed to be the most remote inhabited island in the world. That's why it's also very expensive to get to. But have no fear, you can admire [Easter Island](#) virtually until then.

drift velocity and electron mobility. For example, when you turn on a light switch, an EMF wave is generated by the switch. This wave travels through the wires to the light bulb, where it causes the electrons in the filament of the bulb to move. This movement of electrons heats up the filament, causing it to glow.

So, electricity is both an EMF wave and the movement of electrons. The two are closely related, and they both play an important role in the way that electricity works.

Sources info

1. en.wikipedia.org/wiki/Speed_of_electricity

Do electrons move through a DC circuit at the speed of light?

No, electrons do not move through a DC circuit at the speed of light. The speed of light is the speed at which electromagnetic waves travel through a vacuum. In a DC circuit, the electrons move through a conductor, such as a wire. The speed at which the electrons move is much slower than the speed of light. The exact speed depends on the material of the conductor and the strength of the electric field. For example, in a copper wire, the electrons move at a speed of about 1 million meters per second, which is about 0.01% of the speed of light.

The reason why the electrons move so slowly is because they are constantly colliding with the atoms in the conductor. These collisions slow down the electrons and prevent them from moving at the speed of light.

And Bard can provide alternate answers with other details. Here is the Draft 2 of the above question, which is actually more like the way I personally would have expressed it.

Draft 2

No, electrons do not move through an AC circuit at the speed of light. The speed of light is the speed at which electromagnetic waves travel in a vacuum. When an EMF wave passes through a conductor, it causes the electrons in the conductor to move. However, the electrons themselves do not travel at the speed of light. The speed at which the electrons move is called the drift velocity, and it is much slower than the speed of light.

In an AC circuit, the EMF wave is constantly changing direction. This means that the electrons are constantly being pushed back and forth. The average speed of the electrons is zero, but the individual electrons are moving back and forth at a high speed.

The drift velocity of electrons in an AC circuit depends on a number of factors, including the frequency of the AC current, the resistance of the conductor, and the type of material. In a typical copper wire, the drift velocity of electrons is about 1 millimeter per second. This means that it would take about 10 minutes for an electron to travel the length of a 10-meter wire.

The reason why the electrons move so slowly is because they are constantly colliding with the atoms in the conductor. These collisions scatter the electrons, which slows them down. The higher the frequency of the AC current, the more collisions there are. This is why the drift velocity of electrons is lower in a high-frequency AC circuit than in a low-frequency AC circuit.

Interesting Internet Finds

by Steve Costello
scostello@sefcug.com

Do You Really Need To Have Your VPN On All The Time?

<https://www.howtogeek.com/866500/do-you-really-need-to-have-your-vpn-on-all-the-time/>

This question comes up fairly often. This post gives pros and cons so you can decide about leaving the VPN on all the time. (Note: I keep the VPN on all the time on devices when I am traveling, while only when doing sensitive things like shopping or banking at home.)

Have You Made These Identity Theft Mistakes?

<https://askbobrankin.com/you-made-these-identity-theft-mistakes.html>

Bob Rankin goes over some common Identity Theft mistakes in this post. I read these posts to remind myself of best practices concerning Identity Theft prevention to ensure I am as safe as possible.

Which Should You Use On Your Smartphone?

<https://www.online-tech-tips.com/smartphones/cellular-data-or-wi-fi-which-should-you-use-on-your-smartphone/>

There is no best answer to this question, so I advise reading this article and making the best decision after having the facts. (Note: For me, it depends on the situation and the available speed.)

The type of material also affects the drift velocity of electrons. In a conductor with a high density of free electrons, the electrons are more likely to collide with each other. This also slows them down.

The speed of light is a fundamental constant of nature, but the drift velocity of electrons is not. It can be affected by a number of factors, and it is always much slower than the speed of light.

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The drift velocity of electrons in an AC circuit depends on a number of factors, including the frequency of the AC current, the resistance of the conductor, and the type of material. In a typical copper wire, the drift velocity of electrons is about 1 millimeter per second. This means that it would take about 10 minutes for an electron to travel the length of a 10-meter wire.

The reason why the electrons move so slowly is because they are constantly colliding with the atoms in the conductor. These collisions scatter the electrons, which slows them down. The higher the frequency of the AC current, the more collisions there are. This is why the drift velocity of electrons is lower in a high-frequency AC circuit than in a low-frequency AC circuit.

The type of material also affects the drift velocity of electrons. In a conductor with a high density of free electrons, the electrons are more likely to collide with each other. This also slows them down.

The speed of light is a fundamental constant of nature, but the drift velocity of electrons is not. It can be affected by a number of factors, and it is always much slower than the speed of light.

End of content written by BARD.

Total time to research, write, and edit, 1 hr 27 min.

From the May 2023 issue, DriveLight, <https://uchug.org.1editor101@uchug.org>.

The Best Free Software

By Bob Rankin
a Translator for the Technology Impaired
offering Free Tech Support

It's true... when you get a new computer, it usually comes loaded with a bunch of software you don't want or need. Most of them are free trials or crippled versions, designed to persuade you to upgrade to a paid version. In my article [How to Clean Computer Clutter](#), you'll

*** * Jokes & Quotes Stolen
from Everywhere * ***

Funny one liners

I failed math so many times at school, I can't even count.

Don't you hate it when someone answers their own [questions](#)? I do.

I want to die peacefully in my sleep, like my [grandfather](#)... Not screaming and yelling like the passengers in his car.

I can't believe I got fired from the calendar factory. All I did was take a day off.

My father has schizophrenia, but he's good people.

I was addicted to the hokey pokey, but then I turned myself around.

The easiest time to add insult to injury is when you're signing someone's cast.

I used to think I was indecisive. But now I'm not so sure.

Light travels faster than sound, which is the reason that some people appear bright before you hear them speak.

A termite walks into the bar and asks, 'Is the bar tender here?'

I always take life with a grain of salt. And a slice of lemon. And a shot of [tequila](#).

I just burned 2,000 calories. That's the last time I leave brownies in the oven while I nap.

The problem isn't that obesity runs in your [family](#). It's that no one runs in your family.

find some tips for cleaning out this computer clogging "crapware" and reclaiming that space on your hard drive.

As to your second question, I'm happy to talk about freeware. There are thousands of free programs available online. But there are only a handful that I consider essential, and I download them to every new computer. From security to web browsing, to graphics, productivity, and troubleshooting, here are seven of the most popular and useful free downloads.

[Google Chrome](#): the world's most widely used Web browser, with a commanding lead over Microsoft's Edge and Mozilla Firefox. Unlike some of its competitors, Chrome is available for multiple operating systems, including macOS, Linux and mobile versions for iPhone/Android devices. Other competitors include the Apple Safari and Opera browsers. Chrome's main selling features are speed, and a wide selection of free add-ons and extensions.

[NoteTab](#) is a text and HTML editor for Windows. At its most basic, NoteTab makes a good upgrade from the Windows NotePad text editor. But NoteTab can also handle complex Web projects with its ability to create templates, extensive formatting features, exhaustive search/replace, and vast capacity for multiple large files. NoteTab also competes with third-party editors such as UltraEdit, Notepad++, and TextPad. NoteTab comes in three versions. The Lite version is free, even for commercial use. The Standard and Pro versions add additional features and must be purchased after a 30-day trial. The Standard/Pro bundle is \$39.95.



[LibreOffice](#) is the free, open source alternative to Microsoft Office. LibreOffice has just about everything you'd ever need in a productivity suite: word processing, spreadsheets, presentations, databases, HTML and XML document support. It can open, create and save files in Microsoft Office formats as well as PDF and others. LibreOffice is an amazingly sophisticated piece of software, and it's hard to believe that it's totally free!

[IrfanView](#) is a freeware multimedia viewer and editing program. With this utility you can view, convert, optimize, scan and print virtually any kind of graphic image. You can crop, resize and edit photos, create slideshows, play movies, and much more. Legions of fans around the world have developed plugins for IrFanView, making it almost infinitely extensible.

[Avast Free Antivirus](#) is one of the most popular free antivirus solutions. It includes a fast antivirus scanning engine; real-time protection for email attachments; technology to vet websites before you visit them; and much more. In early 2021, NortonLifelock bought Avira, a competing antivirus program. Months later, Norton purchased Avast, which had bought AVG in 2016.

Odds and Ends

Incandescent Light Bulbs Banned in the US Starting This August, Making Way for Energy-Efficient Alternatives

Staff Reporter, Aug 02, 2023
Starting from August 2023, "normal" incandescent light bulbs are officially banned from sale in the United States. [The Verge](#) reported that users can still use them, although the more efficient LED or fluorescent bulbs will be the primary options available on store shelves. Unlike in 2014, the ban is being fully enforced by the [Department of Energy](#), with manufacturers and retailers having been informed for a year. Few loopholes exist, as any standard bulb generating less than 45 lumens per watt, including halogen technology, falls under the ban.

Incandescent Light Bulb Ban

In April 2022, President Joe Biden's Department of Energy enacted a rule mandating light bulbs to emit a minimum of 45 lumens per watt, a measure of brightness. As a result, the manufacture and sale of conventional incandescent bulbs, which typically provide only 15 lumens per watt, are effectively banned. In comparison, most LED bulbs surpass this requirement, offering 75 lumens per watt or even higher.

Continue on <https://www.sciencetimes.com/articles/45193/20230802/incandescent-light-bulbs-banned-starting-august-making-way-energy-efficient.htm>.

Bottom line, Avast, Avira, and AVG are all owned by Norton, and the future of these three popular tools (and whether they will remain free) is unclear.

I still use Avast for occasional malware scans, but **my preferred internet security tool for the past few years has been PC Matic**. (See [PC Matic 4.0 – My Review](#)) It does cost \$50 a year for up to five computers, but I believe the whitelist approach it uses provides superior protection from malware, including zero-day exploits, rootkits, cryptominers, keyloggers, fileless script attacks, and ransomware.

BitWarden is a popular password manager. It helps you securely manage unlimited passwords, and offers cross platform access for mobile, browser, and desktop apps. It will generate strong passwords for your online accounts, and autofill so you don't have to remember them. BitWarden competes with products such as RoboForm, Dashlane, and KeePass. (Previously I've written about LastPass, but after news of a damaging breach in 2022, I no longer recommend that software.)

Advanced System Care Free is one of the best system cleanup and optimization suites available. It keeps your PC running lean, mean, and fast. This program defragments your hard drive, cleans the registry, finds and eliminates spyware, plugs security holes in system settings, fixes broken shortcuts, deletes junk files, and erases browser tracks.

I can recommend all of these programs without reservation. But it's by no means an exhaustive list of the best freeware. I'll follow up soon with another batch of freebies you may want to try. I welcome your comments and suggestions on this topic... <https://askbobrankin.com>.

END OF ARTICLE

***** 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** click on the URL in the PDF or web versions of this newsletter.

Why You Should Block OpenAI's Web Crawler From Scooping up Your Data

That info could be used to impersonate you

By [Sascha Brodsky](#), Published on August 11, 2023
Fact checked by [Jerri Ledford](#)

Key Takeaways

- OpenAI will let websites block web crawlers from using your data.
- The use of public data to teach AI is a growing problem.
- Experts say online information could be used to impersonate you.

Your online data might be helping to train [generative artificial intelligence \(AI\)](#), but there's a new way to protect your privacy.

[OpenAI announced](#) that it would let you block its web crawler from using websites to help train GPT models. It's part of a [growing debate over whether Large Language Models](#) (LLMs) like ChatGPT should be allowed to slurp up user data.

"If an LLM has been trained on data scraped from the web, it has likely digested a vast amount of people's content," cybersecurity educator [Rebecca Morris](#) told Lifewire in an email interview. "From social media posts to online discussion forums to old blog posts, the LLM knows it all. This raises some disturbing possibilities. For example, perhaps the LLM will accidentally reveal some of a private individual's identifiable information in response to a malicious prompt."

Continue on <https://www.sciencetimes.com/articles/45193/20230802/incandescent-light-bulbs-banned-starting-august-making-way-energy-efficient.htm>.

Club and Regional News

RIT researchers pioneer solutions for degenerative disc disease and back pain

by [Michelle Cometa](#), September 1, 2023

Non-invasive approach involves the use of extracellular vesicles and CRISPR gene-editing to advance regenerative medicine

Karin Wuertz-Kozak and Thomas Gaborski, both professors of biomedical engineering, are collaborating on a project using gene-editing technologies to improve degenerative disc disease.

Rochester Institute of Technology researchers are improving non-invasive treatment options for degenerative disc disease, an ailment that impacts 3 million adults yearly in the U.S., according to the Mayo Clinic.

Using state-of-the-art gene editing technology in mesenchymal stem cells, the researchers will add to the growing field of regenerative medicine, the process of producing cellular therapies to alleviate pain and lack of mobility.

CRISPR technology offers a precise method for genome editing, enabling the modification—knockout or activation—of a single gene or multiple genes within cells. Extracellular vesicles (EVs) are lipid nanoparticles that function as important mediators of intercellular communication by carrying biological cargo, including proteins, lipids, and nucleic acids.

The researchers are targeting TSG6, a critical stem cell marker known to be linked with the regenerative and anti-inflammatory properties of these stem cells.

Both researchers have previously worked together on related topics. [In 2022, the two received an NSF grant](#) to develop processes to biomanufacture CRISPR-edited stem cells capable of differentiation and able to enhance development and improve their isolation and purification.

In the cell culture lab, intervertebral disc cells isolated from surgically removed disc tissue will be treated with these EVs to determine their therapeutic effect in vitro. The team has partnered with the University of Rochester for tissue samples and clinical input.

Continue reading at <https://www.rit.edu/news/rit-researchers-pioneer-solutions-degenerative-disc-disease-and-back-pain>.

Got Questions?

Send an email to either person below and they will get back to you. The questions can be related to the OS (Operating System) or hardware related issues. Please give them time for a response, as they do this service on a volunteer basis. Thank you.

Windows OS: Arpad Kovacs, podcomputer@gmail.com

Linux & some Mac: Carl Schmidtman, unixgeek@faultline.com

Our Meeting Place
St John's Meadows at Johnsarbor Drive, is on the left, past Clinton Avenue, when going West on Elmwood Avenue. The opening in the white fence is Johnsarbor Drive. At the "T", turn right. The meeting is in the **SECOND** building on the left – **Chestnut Court**.
Our meeting place can change. Please check our website before each meeting. **www.rcsi.org**