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An International Association of Technology & Computer User Groups

The Rochester Computer Society, Inc.

a computer/tech club open to everyone

MONITOR

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*** * July and August, summer hiatus – No Meetings * ***

In This Issue

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.*

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.

Can You Get a Virus from a QR Code?

By Bob Rankin
a Translator for the Technology Impaired

You know a technology is catching on when malware creeps start using it to snare unwary users. QR codes, those little squares of black and white patterns that you see in various places, are typically benign shortcuts for mobile users, but they can carry a nasty (and expensive) payload. Read on for the scoop.

QR Code Malware?

"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 and articles too large for this newsletter.

Some Past Presentations:

The New Space Race, 2021
Tech of South America
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
Keeping Mobile Devices Secure
3D Printing, ENABLE project
Internet Security and Privacy
Flash Drives-Not Just for Storage
Features, Mac OS X & Windows

QR codes encode website addresses in a format that can be scanned and deciphered by the camera app on most smartphones. Instead of typing that URL into your phone's browser, you just snap a picture of a QR code and be whisked to an informative Web page, a restaurant menu... or a malicious site that silently downloads a virus, or siphons data from your phone.

In January of this year, the FBI warned about malware delivered via QR codes. The end result could be theft of data from the phone, a malware download, or redirection to a malicious site, which prompts the victim to enter login credentials or financial information. The latter case is just a twist on email phishing scams, but they use a QR code to obscure the link. In the past, I've read about mobile malware capable of sending SMS messages from the infected phone to a premium-priced number, and others that scoop up your contacts list and send spam emails in your name.

Can a QR code itself contain malware? Theoretically, yes, but it wouldn't do much. A QR code can contain only a limited amount of data: 7089 numeric characters or 4296 alphanumeric characters. You can't write much of a program in that space. But a QR code can easily take you to a malicious site. Humans cannot tell one QR code from another, generally speaking. You have no idea where a QR code is going to take you until you scan it. So it pays to be skeptical of all QR codes, while exercising some common sense.

There's an example QR code on this page, which leads to the AskBob home page. You can safely scan that if you want to see how it works. QR codes printed in paper publications, on in-store posters, on coupons from well-known retailers, and similar places are unlikely to be malicious. But never forget the days when shrink-wrapped software packages were infected with malware at the factory by disgruntled workers.

A QR code on a Web page is more easily compromised. If a hacker can crack the site's security, he can replace a legitimate QR code with a malicious one of his own. There have already been reports of malicious QR codes showing up in spam emails. Be a bit more cautious before scanning online QR codes, and especially if they arrive in unsolicited emails.

If you notice a sticker bearing a QR code just randomly slapped up on a wall or a sign post, think twice before scanning it. On the other hand, this method of distributing malicious QR codes is so inefficient that it probably isn't used much.

The FBI warns against downloading apps via QR codes, and advises that you download apps from the official app store for your mobile platform, which would be Google Play for Android devices, and the App Store for the iPhone or iPad. They also advise users to be wary of scams that involve an email about a failed payment with a QR code to complete the payment. If you receive such a message, find the company's customer service phone number on their website and call to verify. Avoid making payments through a website linked to a QR code.

APCUG, An International Association of Technology and Computer User Groups

https://apcug2.org/

Saturday Safaris

Exploring Technology in Depth

Saturdays:

12 pm – 2 pm

February 12, May 7, August 27, and November 5 (along with the annual APCUG meeting)

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

Tech for Seniors

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:
https://apcug2.org/jerestips/

Apple Tech Tips:
https://apcug2.org/50-best-mac-tips-tricks-timesavers/

Penguin Platform (Linux):
https://apcug2.org/penguin-platform/

Chromebook Tips And Tricks:
https://apcug2.org/chromebook-tips-and-tricks/

One thing you can do to minimize risk is preview the destination URL before possibly heading off into some dark corner of the Web. Most smartphones will show you the website address encoded in the QR code, and ask you to confirm before continuing. That's no guarantee that the destination is safe, so you might want to copy the URL and paste it into a URL safety checker. The Google Safe Browsing page and the Trend Micro Safety Center both allow you to do that.

Malicious QR codes can also be countered by anti-malware apps that translate a QR code into a URL and check against a blacklist of known attack sites. Lookout Mobile Security is one such app that works on both Android and iOS devices.

Malicious QR codes are still rare, but if they work you can be sure they'll become more common. It's better to be on your guard now than after you scan the wrong QR Code.

End of Article, www.askbobrankin.com # #

10 Pieces of Tech You Really Don't Need Anymore

By Ayush Jalan

They're old and useless, and you should get rid of them now. Technology grows fast, so fast that the phone in your pocket is millions of times more powerful than all of NASA's combined computing in 1969 that helped put two astronauts on the moon. As we continue to make breakthroughs, more gadgets become relics of the past. In this article, we list ten older gadgets that you no longer need. Let's see what replaced them and why.

1. Typewriters

Typewriters are antique keyboards that directly print on paper. Before typewriters, all official documents and letters were written by hand or printed on a printing press, which was quite expensive. Typewriters were invented as an affordable alternative by Christopher Latham Sholes in 1868.

The first typewriters had mechanical keys attached to lever-like metal surfaces with raised letters and characters. When you press a key, an

RCSI Board Members

Planning Meeting

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

Got Questions?:

Windows: . . . . . Arpad Kovacs
podcomputer@gmail.com
Linux & some Mac: . . . . . .
Carl Schmidtmann
unixgeek@faultline.com

Monitor Newsletter

Club Mailing Address

Rochester Computer Society, Inc
PO Box 18516
Rochester, NY 14618

inked ribbon is sandwiched between the paper and the metal surfaces to print on paper.

It was a revolutionary invention as it changed the way businesses functioned and people shared information. By the mid-1800s, they became indispensable in offices. They reigned for almost a century and were eventually replaced by computers. But even today, many people love the tactile feel of typewriters, especially poets and novelists, so they're not completely dead yet.

2. Payphones

Before mobile phones took over, communication via payphones was the norm. Users could make a call through these public landlines and pay via coins, debit cards, or credit cards. Often payphones were set up inside booths (kiosks) to give privacy for the user, which modern phones had to trade for mobility.

The first pay phone was installed in 1881, and by the 1900s, they were commonly seen in busy streets, train stations, and other public places. But they started to decline as the telecom giants AT&T and Verizon sold off their payphones in the mid-2000s.

3. Photographic Films

Now is the era of instant photography, where clicking a picture and sharing it doesn't take more than a few seconds. Before this, people used still cameras that used photographic films; the latter was invented in 1885.

Before this, photography was only accessible to the rich, but the invention of films commercialized photography. These light-sensitive photographic films were briefly exposed to light to capture images of objects and then chemically developed to produce visible images.

It was a time-consuming and expensive process, which led to the introduction of digital cameras in the 1990s. And by the end of the 20th century, photographic films and film cameras were obsolete.

4. Answering Machines

An answering machine does the same job as the voice mail system on your phone. The only difference is that an answering machine stores caller messages locally on storage mediums like cassettes, while a voice mail system stores them in a centralized computer server.

The first answering machine was invented in the 1930s but only gained popularity in the 1980s. And by the early 2000s, voicemail had replaced answering machines, as it allowed users to access recorded messages anywhere.

5. Pagers (Beepers)

Before mobile phones were invented, people just had landlines, and there was no way to send an emergency message to someone. Solving this problem, Alfred J. Gross invented pagers in 1949 to use in hospitals. These were radio communication devices with unique numbers similar to telephones.

So here's how a pager works: anyone who knows your pager number can send a message (a telephone number or a short text) to your pager via telephone. And when you receive the message, your pager displays it on the LCD screen.

Tidbits of probably useless information

One gallon of used motor oil can ruin approximately one million gallons of fresh water.

In 32 years, there are about 1 billion seconds.

The sun is 330,330 times larger than the earth.

Just like humans can be identified by their fingerprints, dogs can be identified by their nose prints. In some countries, a dog nose print is used to identify dogs, although this is no substitution for a microchip.

A study conducted by the Smell and Taste Treatment and Research Foundation found that overweight people who smelled green apples and bananas, when feeling hungry, lost more weight than those who didn't. Smelling neutral sweet smells can curb hunger, says study. If you do not have a banana or green apple, try smelling vanilla.

The average ice berg weighs 20,000,000 tons.

Some species of poison arrow frog produce a type of batrachotoxin so powerful that only 1/100,000 of an ounce can potentially kill a human.

A lump of pure gold the size of a matchbox can be flattened into a sheet the size of a tennis court.

Houseflies can transmit more than 60 diseases to humans because they sit in dirty places all day and also catch germs from those places. Keep food covered.

While one-way pagers could simply receive messages, two-way pagers and response pagers could also send them. As mobile phones became popular, pagers started to phase out. However, they are still used for emergency services (although rarely) like healthcare and fire safety.

6. Cassette Tape

Although people, especially audiophiles, love vinyl records, they are chunky and delicate to carry around. To solve this issue, Phillips invented compact cassette tapes in 1962. They were initially used for audio recording and playback. But later on, as the VHS standard came about, cassettes started supporting videos as well.

Cassettes were a hit in the music industry and changed how people listened to music. With cassettes, people could just take their music wherever they wanted. They stayed relevant all through the 70s and 80s, but in 1991 CDs replaced cassettes.

7. Floppy Disks

Today we use cloud storage platforms or external storage devices to transfer files between two computers, but back in the day, floppy disks performed that role. With IBM's invention of floppy disks in 1971, sharing programs and loading operating systems became easier.

Since the 1980s, they became the go-to storage solutions replacing punch cards—a piece of paper with punched holes to represent digital data. But by the 1990s, CDs replaced floppies because of storage limitations.

To put this in perspective, the storage capacity of floppy disks is 1.44 MB, and that of a standard CD is 700 MB. If you've still got a stack of old floppy disks sitting around, why not put them to good use?

8. Portable Music Players

We now have the convenience of carrying millions of songs in our pockets, but before the 1970s, people didn't have that option. They could only listen to music at home or in their cars. But the invention of portable music players changed that.

The first-ever truly portable music player, Walkman, was released by Sony in 1979. Replacing Boombox, the Walkman completely changed how people listened to music. Aside from being portable, it also made listening a more personal experience as the device included a headphone jack, which meant you could listen to your music in private through your headphones.

The Walkman used cassette tapes to play music, but soon after, companies introduced portable CD players and MP3 players as well. Among them, Apple's iPod was the one that stood out as it had a sleek design, more storage, and clever marketing. But as smartphones became mainstream, portable music players were slowly left behind.

9. CDs

CDs (Compact Discs) were one of the most popular storage mediums of their time. A successor to cassette tapes, CDs were developed by Philips and Sony in 1982 for Hi-Fi digital audio reproduction. Older CDs could store just 10MB of data, but they later maxed out at a capacity of 700MB.

CDs gained quick popularity in the music industry since they had more storage capacity than the alternatives—making them ideal for

Windows & Android Tips

HOW DO YOU CHECK A SITE IS SECURE ON YOUR SMARTPHONE? – Shopping online or checking your bank account via your Apple or Android device? Here's how to check the site you're visiting is real. **How Do You Check a Site Is Secure on Your Smartphone? (makeuseof.com)**

HOW TO CREATE A GUEST ACCOUNT ON WINDOWS 11 – An easy way to share your computer is to use a dedicated guest account. They can have their own space without access to your personal stuff. We'll show you how to create a guest account in Windows 11**. How to Create a Guest Account on Windows 11 (howtogeek.com)**

USE AN ANDROID? MAKE THIS QUICK CHANGE NOW TO SECURE YOUR PHONE – While some corners of the country are vehemently debating the dangers of 5G mobile technology, a much older mobile signal poses an actual threat to Android and iOS phones. As technology moves ahead with better delivery, coverage and download speeds, the spectrum will inevitably become too crowded or outdated to accommodate them all. Before 5G, 4G, and LTE, the most common mobile connections were 3G and its predecessor, 2G. Read more at **Use an Android? Make this quick change now to secure your phone (komando.com)**

storing high-fidelity music. However, ever since music streaming platforms started taking over near the late 2000s, CDs became increasingly less desirable.

10. DVD Players

Today if you want to watch a movie, you just download or stream it on the internet, but that wasn't the case in the 90s. People rented DVDs of movies and watched them on their TVs. A DVD player is a device that reads these DVDs and plays the videos on a TV, connected via cables.

Succeeding VHS players, the first-ever DVD player was invented in 1996 by Toshiba, and since then, they have become a major part of home entertainment. Due to the low cost of DVD rentals and affordable price of DVD players, they were quickly adopted. However, by the end of the 2000s, they were replaced by movie streaming services.

Tech Grows Exponentially

From barely being able to send messages via telegraph to interacting virtually, we have come a long way in the past two centuries. With every new generation of tech, society changed accordingly and tech gadgets became obsolete more and more quickly. And this trend will only continue to accelerate in the future.

This article was found https://www.makeuseof.com/tech-you-dont-need-anymore/.

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

Data Recovery from Solid State Drive (SSD) and Hard Disk Drive (HDD)

By Brenno Lourran Figueiredo de Morais Brenno Lourran

Data Recovery for HDDs is less difficult and requires less time. With contrast, data recovery is difficult or impossible in SSDs owing to the complex yet sophisticated data storing procedures.

Solid State Drives (SSD) are gradually replacing Hard Disk Drives (HDD), and when purchasing a new laptop, there are a variety of viable SSD alternatives. Additionally available on PCs.

Although Solid State Drive (SSD) and Hard Disk Drive (HDD) laptops are available, the demand for SSD laptops is gradually outpacing HDD, indicating that SSD will soon dominate the market. And as a result, data recovery for your hard drive will be more difficult and costly, since SSD data recovery is a sophisticated operation, and costs are likely to be greater than for older HDD models.

On the other hand, there are still a significant number of users who are uninformed of the distinction between these two drives and their pros and drawbacks. Even though we encounter several Storage Drives on a daily basis, we seldom question if they are Solid State Drives (SSDs) or Hard Disk Drives (HDDs) (HDD). I find it unsurprising that individuals are ignorant of Data Recovery and its extensive capabilities, even with damaged or dead disks. I was unaware of data recovery until I totally destroyed my thumb drive and lost all of my high school photographs last summer.

Scam Alerts

www.experian.com

Continue watching out for tried-and-true scams, such as romance and online purchase scams, but beware of modern twists. Scammers may incorporate a recent event or cryptocurrencies into their messages, and some are using new technology.

While coronavirus-related scams might be losing some steam, you still want to be cautious because scammers continue to use the pandemic for a variety of scams. The exact messaging or approach is often updated to align with the latest concern, whether that's a new variant or lack of available tests. For example, in early 2022, scammers set up fake testing sites to collect people's personal and medical information and sold fake at-home tests online.

Government relief programs are commonly beleaguered by scams as well, and the government response to the pandemic is no exception. Stimulus checks, talk of student loan forgiveness and tax changes can all be woven into scammers' messaging. In one scam, fraudsters even used a government program that helps pay funeral expenses as the basis for a scam.

For more information, explore what government agencies have published on the topic of scams. The Federal Trade Commission (FTC) has a coronavirus page with updated news and scam alerts. The IRS also maintains a list of tax-related scams and consumer alerts.

Well, if you are among those who haven't encountered such tragic tales of data loss or don't know if Data Recovery is possible even from physically or logically dead storage drives, I recommend that you familiarize yourself with your Storage Drive and learn something about Data Recovery; if you use Storage Drives, you are always a potential victim of Data Loss.

• Hard Disk Drive: A Hard Disk Drive is a disk drive containing one or more metallic disks for data storage. These drives are nonvolatile in nature and are capable of storing digitally encoded data on fast spinning magnetic platters. Despite the fact that these platters are constructed of glass or aluminum alloy, their surfaces are coated with a tiny coating of magnetic substance that aids in the process of data storage.

Hard Disk Drives (HDD) were invented by IBM in 1956 as a data storage device for the basic purpose of maintaining their accounting. However, the necessity for a larger and more dependable storage device led to the development of more complicated forms of the HDD, such as RAIDs, NAS, and SANs. The indisputable demand for large storage devices among business organizations and individuals not only compelled the IT industry to produce storage devices with great flexibility and enormous storage capacity, but also compelled them to find a more satisfactory explanation in the event of sudden and unwelcome drive failure or data loss. Consequently, data recovery companies such as eProvided have developed as the answer to data loss.

• Hard Disk Drives (HDD) feature movable components, such as spinning magnetic platters and moving heads, which renders them susceptible to physical obstacles and renders them fragile.

• Magnetic materials are applied to the surfaces of Hard Disk Drive (HDD) platters. Consequently, they should not be subjected to strong magnetic fields.

• Hard Disk Drives (HDD) need more power than Solid-State Drives (SSD) to operate.

• In Hard Disk Drives (HDD), the computer searches the spinning disk for specific data, which may be a lengthy process.

• Hard Disk Drives (HDD) are reasonably priced.

• Hard Disk Drives have a low death rate, speed, and dependability (HDD)

• Data Retrieval is (in most circumstances) basic and straightforward.

• Solid State Drive: Solid State Drives have been identified as a revolutionary memory technology in the IT sector and among data storage enthusiasts. The Drive is non-magnetic and non-optical, but a solid-state semiconductor offers quicker access with greater physical resilience against severe temperature, shock, and needless physical vibrations.

A Solid State Drive is a high-performance, plug-and-play storage device that has no moving parts and contains DRAM or Flash Memory

Interesting Internet Finds

By Steve Costello
scostello@sefcug.com

Computer Won't Stay Connected To Wi-Fi. How To Fix? https://www.techtricksworld.com/computer-wont-stay-connected-to-wi-fi/. This problem happens to everyone, at least everyone I know. Wi-Fi not staying connected is aggravating. Check out this post for solutions to try the next time it happens to you. (Note: Most times for me, rebooting solves the problem.)

Seven Cord-Cutting Misconceptions Cleared Up https://www.techhive.com/article/3633649/seven-cord-cutting-misconceptions-cleared-up.html. Just like with COVID, there are a lot of misconceptions about cord-cutting floating around on the Internet. Check out this post for clarification before deciding what you want to do.

Is Your Ethernet Cable Faulty? Signs To Watch Out For https://www.howtogeek.com/751443/is-your-ethernet-cable-faulty-signs-to-watch-out-for/. Coincidentally, last week my wired desktop speed dropped way down. I switched to Wi-Fi the speed was back to where it usually is. I switched out the ethernet cable for a new one the speed was back. A physical inspection of the old cable showed the connector was coming away from the wire. If you see a similar problem with your wired PC, check out this post.

Boards that are intended to withstand needless physical vibrations and stress so as to ensure trouble-free operation in an uneven environment.

SSDs are equipped with a CPU for data management and are astoundingly quicker than ordinary rotational hard drives. Therefore, they are highly suggested for server systems in which time is critical.

• Solid State Drives (SSD) contain no moving components and are comprised of flash memory chips (NAND Wafers), hence reducing the likelihood of physical damage.

• Since there are no moving components, less power is used, resulting in a longer battery life.

• Magnetic fields cannot cause harm to solid-state drives (SSD).

• Solid-State Drives (SSD) enable computers to retrieve data instantly, as opposed to searching through a rotating disk.

Solid-State Drives (SSD) are more costly than standard Hard Drives.

• Compared to hard disk drives (HDD), solid state drives (SSD) offer lower mortality rates and greater dependability.

• Recovery of data from SSDs is difficult.

Recovery of Information from Hard Disk Drive (HDD) and Solid-State Drives (SSD)

Data Recovery for Hard Disk Drives (HDD) and Solid State Drives (SSD) may be divided into two categories: Tier I (Physical Failure) and Tier II (Logical Failure). Regardless of whether your storage device is an HDD or SSD, if you want Data Recovery Solutions, you will require either Tier I or Tier II data recovery.

Data Recovery for HDDs is less difficult and requires less time. With contrast, data recovery is difficult or impossible in SSDs owing to the complex yet sophisticated data storing procedures. Standard platter-based HDDs may be recovered mechanically, however SSDs need specialized technology, algorithmic understandings for the individual memory chips, and software to attempt data reconstruction.

Hard Disk Drives (HDD) larger than 500 GB, according to eProvided, may be recovered in a few hours or less, whereas a 64GB SSD might take more than 24 hours.

• Logical Damages (Tier II): Logical damage is often caused by power difficulties (too much or too little power, loss of power, power surges, etc.), since this stops your data and file system structure from being entirely written to your storage media. Similarly, a physically damaged storage media might result in similar problems. In both cases, the file system on your storage device remains in an inconsistent condition, necessitating data recovery help to restore and reconstruct the data.

After logical damage, your storage media may exhibit the following malfunctions: drives showing negative amounts of free space, endlessly repeating directories, read/write head clicking, etc.

• Physical Damages (Tier I): In order to recover data from a physically damaged disk, a Data Recovery Company is required. Nevertheless, there are several strategies to avoid such mishaps. Physical strain on a

Around the World

www.un.org/en/global-issues/

Africa

The UN system plays a crucial role in coordinating assistance of all kinds — to help Africa help itself. From promoting the development of democratic institutions, to the establishment of peace between warring nations, the UN is present on the ground supporting economic and social development and the promotion and protection of human rights.

Ageing

The world's population is ageing: virtually every country in the world is experiencing growth in the number and proportion of older persons in their population. The number of older persons, those aged 60 years or over, has increased substantially in recent years in most countries and regions, and that growth is projected to accelerate in the coming decades.

AIDS

New HIV infections have fallen by 35% since 2000 (by 58% among children) and AIDS-related deaths have fallen by 42% since the peak in 2004. The global response to HIV has averted 30 million new HIV infections and nearly 8 million AIDS-related deaths since 2000. The UN family has been in the vanguard of this progress.

Climate Change

Climate change is one of the major challenges of our time. From shifting weather patterns that threaten food production, to rising sea levels that increase the risk of catastrophic flooding, the impacts of climate change are global in scope and unprecedented in scale.

Hard Disk Drive (HDD) might result in more severe issues than on a Solid-State Drive (SSD), which makes the data recovery procedure more difficult.

• Logical Damages (Tier II): Data Recovery for Solid-State Drives (SSD) has always been a complex procedure. There are hazards associated with using data recovery software on a logically damaged or cracked Solid State Drive (SSD). Numerous well-known data recovery organizations assert that utilizing unauthorized and free data recovery software might cause significant damage to your storage device and data.

In addition, a recent industry survey revealed that data recovery software built for Solid State Drives (SSD) is often useless and insufficient. Consequently, it is preferable to contact a data recovery firm such as eProvided than to risk the longevity and integrity of your data and storage device.

• Physical Injury (Tier I):

Manufacturers of solid-state drives (SSD) say that their products may continue to function after being dropped from two-story buildings, although this is not always the case. In the majority of situations, a physically damaged Solid State Drive (SSD) necessitates the services of a Data recovery firm and skilled professionals.

Recovering data from a physically damaged disk necessitates a variety of methods. Depending on the physical instability and kind of physical damage of the drive, several procedures are used. With a well-established data recovery firm and hundreds of replacement components on hand, some recoveries are rather straightforward. eProvided maintains a stockpile of around one hundred thousand components, which increases every day. To reconstruct every one and zero on the drive, including error checking, specialized disk imaging processes and a thorough recovery of every readable bit are used.

Consequently, data recovery methodologies and costs may differ; certain devices seen at eProvided are in more than 15 pieces, and NAND wafers are also broken into more than two pieces, but it is still feasible to recover the data. Bruce Cullen, creator of eProvided, claims, "We are also developing a method to reassemble NAND wafers internally at the microscope level." Consequently, employing software for data recovery on physically damaged hardware has a very low success rate; thus, it is advisable and advised to contact SSD/ HDD recovery specialists..

Technique for Data Recovery from a Drive with Logical Damage:

Consistency Checking is the procedure in which the storage media is subjected to extensive software checks. This operation is carried out meticulously with the aid of sophisticated software that allows a knowledgeable user to comprehend the logical structure of the disk and the correctness of its directory and entries. In any file system, a directory must contain at least two basic entries: a dot entry pointing to itself and a double dot entry pointing to the parent. Data reorganization need the software's assistance in identifying and resolving any potential errors.

Source: Free Guest Posting Articles from ArticlesFactory.com

* * Jokes Stolen from Everywhere * *

Sarah Silverman

My kitchen floor is sticky, and I had to do something about it.. so finally I went out and bought some slippers.

I don't want to be labeled as gay or straight. I just want people to see me… as white.

My sister was with two men in one night… she could hardly walk after that; can you imagine – two dinners!

I can't wait till Sunday, I'm gonna see my favorite niece and my other niece.

Nothing seems crazy when you're used to it.

I will always try to be happy. I don't think people really understand the value of happiness until they know what it's like to be in that very, very dark place. It's not romantic. Not even a little.

Some people say my humor focuses too much on stereotypes. It doesn't. It focuses on facts.

I don't set out to offend or shock, but I also don't do anything to avoid it.

Men like to squash you. I just want someone who's happy with himself, happy with his life. He doesn't have to squash mine.

I want to get an abortion. But my boyfriend and I are having trouble conceiving.

I dated a guy who was half-black, but he dumped me because I'm such a loser. Wow, I shouldn't say things like that, I'm such a pessimist…he's actually half-white.

I'll tell you why we make fun of midgets: We're not afraid of them.

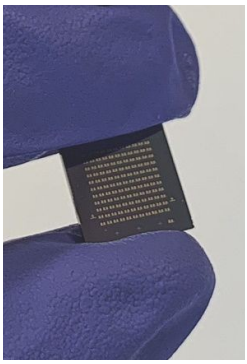
* * * * * BITS and PIECES in the NEWS * * * * *

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.

Researchers develop the world's first ultra-fast photonic computing processor using polarisation

InnovationMathematical, Physical and Life SciencesResearchScience

New research uses multiple polarisation channels to carry out parallel processing – enhancing computing density by several orders over conventional electronic chips.



In a paper published in Science Advances, researchers at the University of Oxford have developed a method using the polarisation of light to maximise information storage density and computing performance using nanowires.

Light has an exploitable property – different wavelengths of light do not interact with each other – a characteristic used by fibreoptics to carry parallel streams of data. Similarly, different polarisations of light do not interact with each other either. Each polarisation can be used as an independent information channel, enabling more information to be stored in multiple channels, hugely enhancing information density.

Photonic computing is carried out through multiple polarisation channels, leading to an enhancement in computing density by several orders compared to that of conventional electronic chips. The computing speeds are faster because these nanowires are modulated by nanosecond optical pulses. The new chip promises to be more than 300 times faster and denser than current electronic chips.

Whole article is at https://www.ox.ac.uk/news/2022-06-16-researchers-develop-worlds-first-ultra-fast-photonic-computing-processor-using.

Artificial photosynthesis can produce food without sunshine

University of California - Riverside

Scientists have found a way to bypass the need for biological photosynthesis altogether and create food independent of sunlight by using artificial photosynthesis. Photosynthesis has evolved in plants for millions of years to turn water, carbon dioxide, and the energy from sunlight into plant biomass and the foods we eat. This process, however, is very inefficient, with only about 1% of the energy found in sunlight ending up in the plant. Scientists at UC Riverside and the University of Delaware have found a way to bypass the need for biological photosynthesis altogether and create food independent of sunlight by using artificial photosynthesis.

Odds and Ends

Discovery of gene involved in chronic pain creates new treatment target

BiologyMedical SciencesResearch, Oxford University

Oxford researchers have discovered a gene that regulates pain sensitisation by amplifying pain signals within the spinal cord, helping them to understand an important mechanism underlying chronic pain in humans and providing a new treatment target.

Chronic pain is a common issue affecting millions of people worldwide, but why some people are more prone to it and what factors lead to chronic pain are not fully understood.

It is well known that repeated stimulation, such as with a sharp pin prick, can lead to a heightened sensitivity to pain. This process is called 'pain wind-up' and contributes to clinical pain disorders.

In a two-part study, researchers from Oxford's Nuffield Department of Clinical Neurosciences firstly compared genetic variation in samples from over 1,000 participants from Colombia, to look for clues as to whether there were any genetic variants more common in people who experienced greater pain wind-up. They noted a significant difference in variants of one specific gene (the protein Sodium Calcium exchanger type-3, NCX3).

Check out the rest of this article at https://www.ox.ac.uk/news/2022-06-15-discovery-gene-involved-chronic-pain-creates-new-treatment-target

The potential for employing this technology to grow crop plants was also investigated. Cowpea, tomato, tobacco, rice, canola, and green pea were all able to utilize carbon from acetate when cultivated in the dark.

We found that a wide range of crops could take the acetate we provided and build it into the major molecular building blocks an organism needs to grow and thrive. With some breeding and engineering that we are currently working on, we might be able to grow crops with acetate as an extra energy source to boost crop yields.

By liberating agriculture from complete dependence on the sun, artificial photosynthesis opens the door to countless possibilities for growing food under the increasingly difficult conditions imposed by anthropogenic climate change. Drought, floods, and reduced land availability would be less of a threat to global food security if crops for humans and animals grew in less resource-intensive, controlled environments. Crops could also be grown in cities and other areas currently unsuitable for agriculture, and even provide food for future space explorers.

The whole article may be read at https://www.sciencedaily.com/releases/2022/06/220623122624.htm.

New Beer in Singapore is Made From Recycled Sewage Water

By Adrianna Nine on July 5, 2022

Your local craft brewery might have a range of beers made with creative ingredients, like small-batch coffee, native botanicals, or even steeped pizza crusts. But unless you're in Singapore, it'll be difficult to find this one: a blonde ale brewed with recycled sewage water.

Singaporean brewery Brewerkz worked with the country's Public Utilities Board (PUB) to produce the unique pour. PUB has been investigating ways to reduce water waste for quite some time, beginning with a study on sewage water sterilization in the 70s. By 1998, PUB had found a way to treat, reclaim, and produce sewage water for reuse without sacrificing affordability or public health. The sterilized water—called NEWater—was first introduced to raw water reservoirs, from which it would eventually make its way into the general water supply. Now, however, NEWater is sold for direct consumption in plastic water bottles.

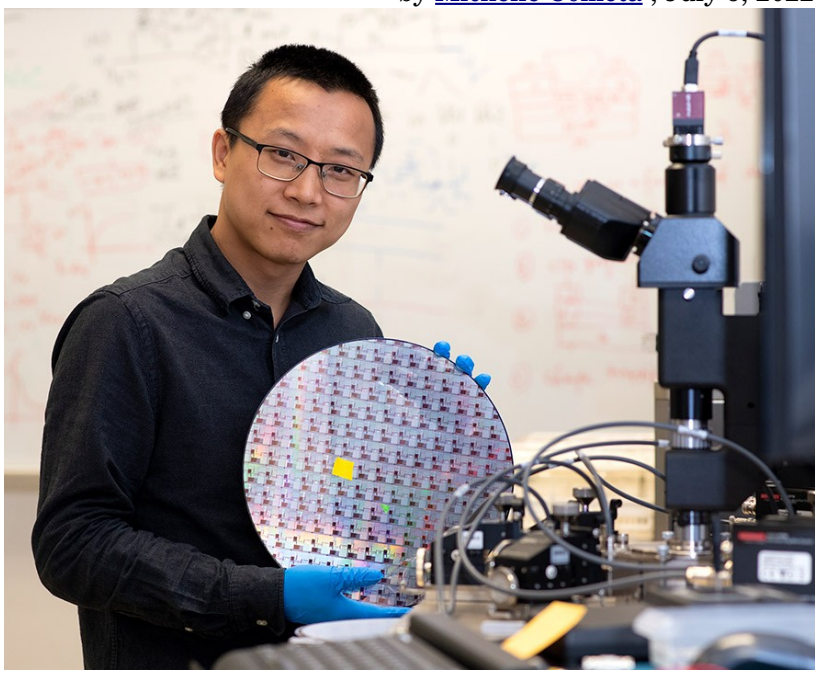
Brewerkz started using this newer, drinkable iteration of NEWater to brew "NEWBrew" in 2018. The tropical blonde ale just began hitting supermarket shelves in April, where it's expected to sell out by July thanks to a surprising level of demand. In fact, the brew has already sold out at Brewerkz locations.

NEWBrew isn't just a novelty beverage: it's also intended to raise awareness for water conservation. From California to Sydney, Australia, areas experiencing water shortages have begun to test and even embrace the idea of reintroducing treated sewage water into the general supply.

This article was reported on https://www.extremetech.com/extreme/337659-new-beer-in-singapore-is-made-from-recycled-sewage-water.

Microelectronic engineering professor developing options for improving memory technologies for storage and computing

by Michelle Cometa , July 6, 2022



Engineering faculty-researcher Kai Ni was awarded funding to improve computing memory technologies through DARPA's Young Faculty Award Program. Research at Rochester Institute of Technology into new energy-efficient materials for computing could improve the bottleneck that often occurs when retrieving large amounts of data, hindering processing throughput and energy efficiency.

Kai Ni, assistant professor of electrical engineering in RIT's Kate Gleason College of Engineering, received funding to advance alternative materials and processes toward improving how electronic devices store, retrieve, and process big data. The funding is part of the Defense Advanced Research Projects Agency's (DARPA) Young Faculty Award Program, given to early career faculty-researchers exploring technologies in the areas of national security.

Ni is an expert in the field of semiconductors and novel computing memory technologies. His work is in the area of ferroelectrics, an emerging field where energy efficiency and increased computing power is being developed through integration of new materials, the physical modeling of devices, and more effective application of the developed devices into accelerator system architectures—the overall computer processing systems.

Reported on the RIT website, https://www.rit.edu/news/microelectronic-engineering-professor-developing-options-improving-memory-technologies-storage.

RCSI

*** * July and August, summer hiatus – No Meetings * ***

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 Schmidtmann, unixgeek@faultline.com

New Meeting Place

Our Usual Meeting Place is being renovated.

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**