

Got Questions?



VERMONT COMPUTING INC.

Email us and we might feature your question in the newsletter!

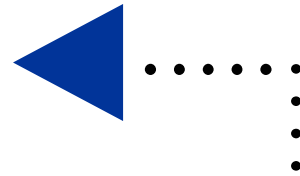
newsletter@vermontcomputing.com

Subscribe to this newsletter online! Visit:
<http://www.vermontcomputing.com/newsletter/>
or send an email to newsletter@vermontcomputing.com



Vermont Computing, Inc.
23 Merchants Row
Randolph, VT 05060
Tel: (802) 728-9217

Take one!

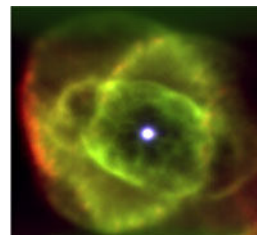
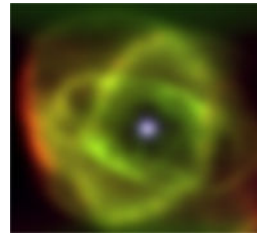


Store Hours: Mon – Fri 8:00 – 6:00 Sat & Sun 10:00 – 12:00

Power Protection 101: Learn how to protect your equipment from power surges with VCI's Tech Tips



**"Lucky Camera"
takes sharpest ever
images of stars**



**Vol 7 Issue 17
Sept. Part 1
Newsletter**

- IN THIS ISSUE:***
- TAYLOR'S TECH TIP:***
- ***KNOWLEDGE IS POWER***
- HEADLINES:***
- ***GOOGLE "GPAY" PATENT REVEALS PLANS FOR MOBILE PAYMENTS***
 - ***COMCAST FORGING PACKETS TO FILTER TORRENTS***
 - ***SUPERCAPACITOR "BATTERY" COULD LEAD TO INSTANT CHARGING, LONG CHARGE LIFE***
 - ***"LUCKY CAMERA" TAKES SHARPEST EYER IMAGES OF STARS***
- SHUTDOWN:***
- ***"POWER" USERS***

Taylor's Tech Tip - Knowledge is Power



This issue's tech tip comes from our technician Taylor, who advises PC users to make certain they are protected from power surges.

Especially during late summer when lightening storms can roam the skies, it's particularly important to make certain that not only your power connections are protected, but your phone/modem lines, and cable lines as well.

Howstuffworks.com's **Picking the Right Surge Protector** section (<http://computer.howstuffworks.com/surge-protector6.htm>), offers some advice on choosing an appropriate surge protector.

They recommend choosing a higher priced surge protector, at least above \$10. Also look for the Underwriters Laboratories (UL) rating, and make certain it is listed as a **transient voltage surge suppressor**, if not, it's listed only for its performance as an extension cord. UL is a not-for-profit company that tests electric and electronic products for safety. A UL rating is not a guarantee of quality, but it helps.

Because of the way that surge protectors work, it's important to make sure they are plugged into a **grounded outlet**. This is because the components inside actually divert the excess voltage to the ground connection, so if the outlet is not grounded, the energy has no where to go. Better surge protectors have a built in ground light, that will light up to indicate that your ground connection is good. If the ground light does not come on, use a different outlet.

As a backup, some surge protectors also have a built-in **fuse**. If enough electricity makes it past the diversion process, the fuse will burn out, cutting off the circuit. This fuse only works once, as it is destroyed in the process. At that point, you would want to purchase another surge protector. Better surge protectors will include a light to indicate if the surge protection is still good.

An **Uninterruptable Power Supply** (UPS) can store power in a battery, and use it to run your components. "If the power goes out, your computer will continue to run, feeding off the stored battery power. This will give you a few minutes to save your work and shut down your computer. The conversion process also gets rid of most of the line noise coming from the AC outlet..."

An ordinary UPS WILL give you a high level of protection, but you should still use a surge protector. A UPS will stop most surges from reaching your computer, but it will probably suffer severe damage itself. It's a good idea to use a basic surge protector, if just to save your UPS."

We carry a number of quality surge protector products in our store, from power strips to UPS systems. Remember to choose a model that can also protect your modem/phone line and cable connection, since these lines are just as susceptible to power surges as power lines. Keep in mind that lightening striking close enough can defeat surge protection, but maintaining adequate surge protection is invaluable in keeping your equipment safe.



Headlines

Google "Gpay" patent reveals plans for mobile payments

<http://arstechnica.com/news.ars/post/20070905-google-gpay-patent-reveals-plans-for-mobile-payments.html>

Talk of Google's entry into the mobile market (currently referred to as the gPhone) has swirled for weeks now as additional information and rumors have been leaked regarding the company's mobile plans. Now, new evidence of Google's long-term interest in the mobile market has surfaced in the form of the company's patent application covering mobile payments made via SMS.

Google's patent application...Essentially...describes a system where a text message (specifically an SMS message) would be sent containing a payment amount. That payment amount would then be validated, debited from the user's account, and communicated from server to server. Confirmation that payment had been received would also simultaneously be sent to the relevant party...

The implications of a truly platform-independent system are potentially tremendous, particularly if Google tied the system (or some future iteration of it) to Google Checkout. A single, secure, and platform-independent system of payment could do for the mobile phone system what Paypal has done for computing in general - namely, give it a single, (generally) trusted application that can handle a variety of payments, whether via auction, between persons, or between a person and a business.

Although Google has yet to specifically confirm the gPhone, this patent application is the latest indication that the company is thinking about the mobile experience in some new and exciting ways...

Comcast Forging Packets To Filter Torrents

<http://it.slashdot.org/article.pl?sid=07/09/04/2014236>

"It's been widely reported by now that Comcast is throttling BitTorrent traffic. What has escaped attention is the fact that Comcast...uses forged TCP Reset (RST) packets to do the job...it turns out that Comcast may actually be violating criminal impersonation statutes in states around the country. Simply put, while it's legal to block traffic on your network, forging data to and from customers is a big no-no."

Supercapacitor "battery" could lead to instant charging, long charge life

<http://arstechnica.com/news.ars/post/20070904-supercapacitor-battery-could-lead-to-instant-charging->

[long-charge-life.html](#)

The batteries we rely on for everything from our cars to our cell phones use a chemical reaction to store and release an electrical charge...News is filtering out that a small startup company in Texas has made a breakthrough in charge storage that relies on a completely different technology: capacitors...

...A key advantage of capacitors is that they can store charge just as quickly as it's supplied - the long charge times needed by chemical batteries are simply unnecessary. With no chemical reactions involved, capacitors should also have an indefinite life span.

These features may lead you to wonder why everything isn't running on capacitors. The primary limit to the amount of electrical charge that can be stored in a capacitor is the amount of insulation between the plates...In short, capacitors with a sufficient charge capacity take up far too much space.

The Texas company behind the apparent breakthrough, EESstor, is primarily notable for...a patent application that describes a process for manufacturing a well-insulated capacitor. It apparently relies on barium titanate (BaTiO3) as an insulator, something that's been tried in the academic world. But line eight of the patent application suggests that the charge storage is much higher than anything achieved in an academic lab: 52 kilowatt-hours in a 2,000 cubic inch capacitor array...over 10 times the power density of standard lead-acid batteries.

Is this sort of breakthrough realistic? In the absence of an actual product, it's easy to dismiss patent claims as hyperbole. But the Associated Press is reporting that the ZENN Motor Company, which makes compact electric cars, plans to start using the capacitors before the year is out...EESstor is also led by personnel from IBM, which has a strong materials science research presence and has attracted the backing of a tech-savvy investment capital firm. Still, the AP report quotes a number of researchers in the field as being extremely skeptical. One noted that the charge density claims of the patent would represent a 400-fold improvement over existing technology.

Given ZENN Motor's plans, we shouldn't have long to wait before finding out how realistic the patent's statements are...Until that product is released, however, the skeptics have ample reason to question these claims.

VERMONT COMPUTING, INC.

"Lucky Camera" takes sharpest ever images of stars

http://www.ast.cam.ac.uk/~optics/Lucky_Web_Site/LI_Press_Releases_0807.htm

A team of astronomers have taken pictures of the stars that are sharper than anything produced by the Hubble telescope, at 50 thousandths of the cost.

The researchers, from the University of Cambridge and the California Institute of Technology (Caltech), used a technique called "Lucky Imaging" to take the most detailed pictures of stars and nebulae ever produced - using a camera based on the ground.

Images from ground-based telescopes are usually blurred

by the Earth's atmosphere - the same effect that makes the stars appear to twinkle when we look at them with the naked eye.

The Cambridge/Caltech team, however, surpassed the quality of images taken from space by using a high-speed camera to take numerous images of the same stars at a rate of 20 frames per second. Because of fluctuations in the atmosphere, some of these were less smeared than others. The team then used computer software to choose the best images, and these were combined to create pictures far sharper than anything that has been taken from space...

Shutdown - "Power" Users (http://www.rinkworks.com/stupid/cs_power.shtml)

- I worked with an individual who plugged his power strip back into itself and for the life of him could not understand why his system would not turn on.

- I work in the IT department of a local hospital. One night at 3am, I got a call that one of the PCs in reception had been shut down, and they couldn't switch it back on. I described how to power it up over the phone, but it was no use. So I drove in, walked up to the PC, and pressed the little gray button on the front.

Receptionist: "How did you do that???"

Me: "I just switched the power on."

Receptionist: "Ah well, we're not as computer literate as you."

- I worked in technical support at Silicon Graphics...Now, as you may or may not know, SGI sells top of the line computers used in many different industries. On average, they're about three times as expensive as personal PCs and are meant to be used by professionals in the industries they're used in.

Anyway, the following call came in:

Customer: "I just received an Onyx yesterday, and I tried to set it up today and it doesn't work."

Tech Support: "It just doesn't boot up?"

Customer: "It doesn't even turn on. I see nothing on the screen, and the fan doesn't even turn on in the back of the system."

Tech Support: "Is the monitor functioning? Is there a little green light in the lower right corner of the monitor?"

Customer: "Yes, there is."

Tech Support: "Ok, is the computer plugged in?"

Customer: (irritated) "Look, I think I know how to set up a system. I'm a college graduate, you know."

Tech Support: "Ok, let me finish typing up this report,

and I'll send it off. You will get a reply within one business day."

Customer: (exasperated) "Thank you. Geez, I mean I paid a huge amount of money for this computer. The least you people can do it make sure it works before sending it to me!

I roll my eyes as I continue to type.

Customer: "I mean, to add to the poor quality control, you even sent me one extra power cord."

Tech Support: "One extra cord?"

Customer: "Yes, it looks just the one I used to plug in the monitor and computer, but that's all you sent to me. I have no use for this other one."

At this point, I thought I should inquire a little more...but use a bit of tact to do so.

Tech Support: "Sir, can you double check the serial number on the back of your computer?"

Customer: "On the back of the computer?"

Tech Support: "Yes, sir."

Customer: (sigh) "All right, all right, hold on..."

I heard a few muffled grunts as he crawled over his desk to see the back of the computer. He repeated the serial number from the sticker. I didn't bother to verify it.

Tech Support: "Thank you, sir. Oh, by the way, can you check to see if the computer is plugged in?"

Dead silence. I could just picture the man's face when he realized that the computer was never plugged in in the first place and that the "extra" power cord he was holding in his hand was for the computer. I didn't wait for a response from him. I thanked him for calling, hung up, and closed the case.