directive

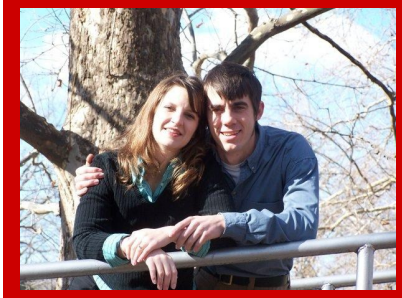
TECHMinutes

March 2013

Your Small Business Technology Information Source!

This Issue:

Directive Presents: Kaler Carpenter



Directive would like to welcome Kaler Carpenter to our content team. Kaler and his wife Laura moved to Oneonta, NY in 2009 in order to start a new church called The Redemption Movement. Originially from Missouri, Kaler and Laura met each other while . . .

Read the rest Online!
http://bit.ly/YyeEdh

About Directive

We are a technology consulting firm specializing in technology implementation and management for businesses. We're known for providing big-business, Enterprise-Level IT services to small and medium-sized businesses.

Visit us **online** at:
newsletter.directive.com

Most for Your Money: Use the 'Teardown' When Buying Hardware

The majority of today's more conscientious shoppers will check out the consumer reviews of the device as well as the detail specifications before purchasing a product. Just because it's pretty and all their friends at school have one, doesn't always mean that it is the best value for your money. Still, we rarely consider: Do review sites and vendor release notes tell the whole story? Is this device really better because of its price tag or big name brand? There is a widely underused but extremely valuable resource online where customers can gain a little more perspective. This is called the product "teardown".

These component breakdowns, which depending on the popularity of the device, may be free. As a detailed analysis of the device, the focus of a teardown is on what exactly you are paying for (hardware wise) as well as what the vendors profit margins will look like. This is an interesting tool -- even if only used in a feel-good buyer's satisfaction, gloat-to-your-friends-after-purchase kind of way. IHS - iSuppli® is a website that has an extensive library of product tear downs as part of their market research.

The best way to use this knowledge is to work out the difference on what you are paying for. Take as an example, the popularity of tablets. In the game of tablets, there are currently four major players in the market: Apple, Microsoft, Google, and Amazon. These major players are often split into the low-end (Amazon and Google) and high-end (Apple and Mi-

(Continued on page 3)

3 Security Issues that Put Your Business at Risk!

Everybody has a weakness; Superman has Kryptonite, the Wicked Witch of the West had water, and the Death Star had a womprat-sized exhaust port. Character weaknesses make for solid storylines because they drive conflict. Your company has its own set of vulnerabilities that you may not know about, and unlike stories, conflict in business is not a good thing. Here are a few of the lesser known IT weaknesses, and what you can do to resolve them.

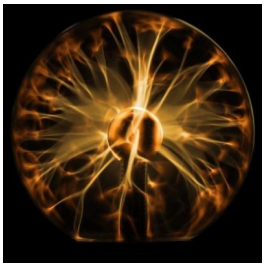
Weak Wi-Fi Security

If your Wi-Fi is using WEP protocol, it's pretty much like locking your front gate with a twist tie. WEP security will only stop the honest people from logging in, surfing the internet, and using your bandwidth. However, if someone is going to be malevolent and they have a little know-how, then decoding your WEP security will be a quick and easy exercise. In fact, all it takes is a decent laptop with some free software to crack your WEP security in just a few minutes.

The solution is to at least have your router set up with the WPA security protocol. WPA is not perfect, but it is much more secure. Another Wi-Fi security measure that you can take is to ensure that all the other pieces of your network security are in place, this will help to pre-

(Continued on page 2)

Power Outage Protection with UPS



One shocking IT scenario that we regularly encounter is expensive computer hardware plugged into inexpensive power strips. Power strips are adequate if you need a few extra outlets for your kitchen appliances, but if you want to protect the computer hardware that is mission critical to your business, like servers and NAS devices, then you will need a solution that is more powerful.

Making electricity flow consistently is difficult. Think of the electricity inside an energy orb that you might have touched while at a science museum, the movement of electricity from the center of the orb to your fingertip looks like a wave. Electricity that is delivered through your power lines is channeled much more efficiently than an energy orb, but it can still ebb and flow like a wave.

These power fluctuations can cause damage to electronic devices, especially computers. Normal power fluctuations may not immediately disable your device, but it will wear it down and decrease the device's lifespan. This is the nature of waves; the fluctuations of electricity will slowly wear down a device in the same way that ocean waves will smooth out a rock at the beach.

The best protection for your IT infrastructure from the waves of electricity, and even straight up power outages, is an Uninterrupted Power Supply (UPS). There are many different UPS models on the market. A small UPS will protect a single computer and a monitor. The world's largest UPS is 46-megawatts and protects the entire city of Fairbanks, Alaska from power outages.

A UPS is different than a backup generator, but it does function similarly by providing power in the event of an outage with a maximum switchover time of 25 milliseconds. When power goes down, the UPS is able to provide energy from its built in battery or flywheel. The amount of time that a UPS can provide power also varies with different models and the size of the battery.

The average UPS can only provide a few minutes' worth of power; this is enough time to keep equipment running while backup generators are hooked up. In fact, the UPS and backup generator combination is the standard setup for data centers, which are large warehouses full of thousands of servers built to keep data safe. Many data centers are designed so that every server has its own UPS. This extra expense is worth it to be able to make the guarantee that nothing will happen to a customer's valuable information.

Another electricity risk that your office will face is a straight up power surge from a lightning strike. Lighting can be very damaging. A single lightning bolt contains several hundred million volts of electricity. Anybody who thinks a cheaply made power strip will be able to stand up to the mighty Zeus, god of the sky

(Continued on page 4)

3 Security Issues that Put Your Business at Risk!

(Continued from page 1)

vent unauthorized access from nearby network snoopers.

Your Passwords Aren't Strong Enough

These days, strong password security means having more protection than just a strong password. If you use the same password on every account, then you are at risk. If one website gets hacked and your credentials were stolen, and you use those same credentials on other sensitive accounts, then all of you other accounts are now at a major risk.

The best practice for password security is to not reuse passwords. Instead, take advantage of password management tools like KeePass, LastPass, and RoboForm. These tools will let you securely store and manage your accounts and even generate complex and secure passwords. Every few months, it is also a smart idea to freshen up your passwords by cycling out your old passwords for new ones.

Your Software is Generously Sharing your Data

It's likely that you use a lot of different applications on your workstation and visit a variety of websites. It is important to keep all of your programs up-to-date. It is also important to remember that Windows Updates only covers Microsoft software and not third party applications. Out-of-date software can potentially be the exhaust port to your PC Death Star; this is one weakness that the Hacker Alliance would love to exploit. The solution to this vulnerability is to keep your software up-to-date. Most applications allow you to check a box in the settings that will allow the software to automatically check for updates, be sure that you do this. If you aren't sure if the apps that you use on a regular basis are running the latest version, then you can check the software manufacturer's website, or just reach out to Directive at 607.433.2200 and have us do a deep investigation on your workstations and network.

Share this Article!
http://bit.ly/Yydkac

Most for Your Money: Use the 'Teardown' When Buying Hardware

(Continued from page 1)

crosoft) price range -- with the low-end being between $200-300 and the high-end being between $400-$800.

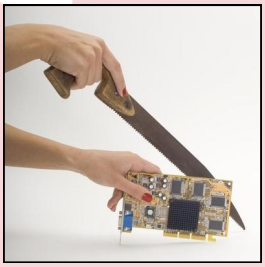
The reason behind the large gap in pricing cannot be laid out as a plain, straight forward difference in the quality and ability of these tablets. Apple has better hardware. Amazon's Kindle is used just for reading and is a lightweight tablet. Interestingly, when you look at their bare parts, a explained in the teardowns of these two products, they are not all that different. In reality, nearly all of the popular tablets on the market fall into a $150-$300 price range. The rest is all clever marketing and software development. An example, of the Nexus 7, produced by Google and Asus, first entered the market with 2 models. One model was the 8gb and the other, 16gb, priced at $199 and $249 respectively. The cost to make the 8gb model was $151. Because there is a small profit margin for the 8gb version of the tablet, Google decided to offer a 16gb version for $50 more. Interestingly, the upgrade in chip production costs for the 16gb tablet only cost the manufacturer $8 more.

It's common place for manufacturers to lower their manufacturing costs by using a third party technology. Two notable exceptions, Apple and Samsung, prefer to control every aspect of their products to ensure quality and stability. Names like Nvidia, Intel and AMD will partner with a hardware manufacturer to save money on developmental costs. Using third party technology will save the end user money by lowering manufacturing costs of the product. These offer a lot more options for buyers as well. There are many more options for the Android and Windows as compared to Apple's iPhone.

If you're in the market for a new computer, keep in mind that using the teardown will save you money in the end. Today, a computer is essential to life and there are many ways to build it, sell it, and tweak it. Be informed.

Share this Article!
http://bit.ly/YycFG1

Your Computer Hardware is Built to Last



We understand your desire to upgrade to a new computer, using the latest technology has its advantages. Although, upgrading because your old PC has "worn out" may be an inaccurate assessment. There are many reasons why a computer's performance slows down, but it is doubtful that hardware deterioration is a cause. This is because PC hardware is built to last.

It is easy to see where the idea that PC components will wear out over time comes from. Computers are machines, another machine that we use all the time is our vehicles, and almost every part in our cars is destined to wear out after enough use, but computers are different. Whereas most machines like cars are made up of several moving parts that will literally wear down due to friction, computer hardware includes few moving parts. Most components are used to relay electrical signals, this is why electronics can last a long time and why you see more old microwaves in use than you do old cars.

Computer hardware components that relay electrical signals do not wear out with use. This is like saying an old extension cord has worn out because it has been overused. You may even have electrical wiring in your house that is older than you are, but it is still functioning; and, if one day you noticed a decrease in power, you would replace the outdated fuse box before tearing into your walls and stripping out the old wiring. The main reason that computers gradually lose performance is not due to old hardware; instead, slower PC performance stems from software updates and adding large applications that drains more of your computer's power.

NASA's two Voyager probes can provide us with a great example of the lasting power of computer hardware. These exploratory probes were launched in 1977 to study the planetary systems of Jupiter and Saturn. Upon successfully completing the mission to study the planets and moons in our solar system, NASA was then able to guide the Voyager probes beyond our system with several of the scientific instruments still intact. In 2013, with instruments still beaming back data to Earth, Voyager 1 is pushing ever closer to leaving the solar system and giving mankind our first glimpse of interstellar space. It is estimated that the Voyager probes will be able to operate until 2025. The probes demise will not be because the hardware will wear out, but it will be due to the probes finally running out of power.

It is important to point out that the Voyager probes do not upgrade to a newer and bigger operating system every three years. Your cellphones (which have more computing power than the Voyager probes) are usually upgraded to allow us to use bigger applications. The need to upgrade because of software sometimes means that we will toss out perfectly

(Continued on page 4)

Power Outage Protection with UPS

(Continued from page 2)
and ruler of the Olympian gods, is only kidding themselves. In ancient Greek mythology, Zeus is described as eating bowls of power strips for breakfast.

Lightning strikes can cause serious damage to your property, but at least burnt out power lines can be replaced. If your company's servers are hit by lightning, and all of the data stored on the unfortunate server was not backed up, then your data will be gone forever. Insurance will cover the cost of buying a new server, but no amount of money will be able to buy back the lost data you need to run your business.

Your best protection against a disaster like a lightning strike, or any other disaster like a fire or a flood, is to have your data automatically backed up offsite with Directive's backup and data recovery solution (BDR). A BDR will back up your company's data to data centers like the ones that we mentioned earlier. These data centers not only use uninterrupted power supplies and backup generators, but they will also redundantly store your data in multiple data centers just in case one data center was to ever go down.

To learn more about BDR and UPS call Directive at 607.433.2200. We can find the right sized UPS for your IT infrastructure, and provide you with a BDR solution that will keep your data safe no matter what type of power anomaly strikes your business.

Share this Article!
http://bit.ly/YydBKn

We partner with many types of businesses in the area, and strive to eliminate IT issues before they cause expensive downtime, so you can continue to drive your business forward. Our dedicated staff loves seeing our clients succeed. Your success is our success, and as you grow, we grow.

Chris Chase
Solutions Integrator

Your Computer Hardware is Built to Last

(Continued from page 3)
good electronics. In fact, every time you throw away a device that works, the lonely Voyager probe cries one space tear.

In theory, on day one of powering on your PC, if you were to do a clean install and never update any of your software, then you would not see a performance issue with decades of use. Now granted, the hardware will one day die. Hardware is built to last, but it is not immortal. When computer hardware dies, it dies suddenly in what's commonly referred to as a crash. The day that the blue-screened reaper touches your hardware will be a day that you will not see coming because your PC should be performing fine up to that point. Of course, proper PC maintenance will also play a role to get this kind of steady performance out of your computer. For best PC performance results, Directive can remotely oversee the required PC maintenances so that your computer will last as long as possible.

When computer hardware crashes, it can be a devastating event that will take your data with it down to its silicone grave. As long lasting as your PC hardware is designed to be, the weakest hardware component to your computer is also the most important, the hard drive. This is because, unlike other hardware components, hard drives have moving parts that will eventually wear down. Upgrading to a solid state drive will remedy this problem because it does not. . .

Read the rest Online!
http://bit.ly/Yye9jv

Charlotte Chase
Solutions Integrator

Directive

330 Pony Farm Road
Suite #3
Oneonta, NY 13820
Toll-Free 888-546-4384
Voice: 607-433-2200

Visit us **online** at:
newsletter.directive.com

facebook.directive.com
linkedin.directive.com
twitter.directive.com
blog.directive.com
newsletter@directive.com