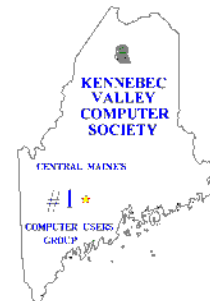


The Newsletter of the Kennebec Valley Computer Society



DECEMBER 2011

Power to the Pixels!

**Written by Dave Christenson,
The digital photo guru and
member of the Fox Valley
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I suspect that everyone reading this has at least one digital camera. What criteria did you use when buying it? Size, features, cuteness, need, impulse? Some or all of these? Maybe. But I'll bet that two you definitely considered are price and pixel count. All other things being equal, low price and high mega-pixel count is good! Right? Not always. I'll certainly go along with the low price bit, but let's think about the pixels a bit.

Why do we want more pixels? Obviously, because the picture, or image, is made out of pixels, the more pixels we have the more detail the image can contain and the greater we can enlarge it, or more cropping we can do. If we go beyond the capabilities of the count, we get what's called pixilation, or, more informally, stair-stepping,

where a diagonal line zig-zags. Also called, for obvious reason, "the jaggies." So, why don't we necessarily want the most pixels possible for the price?

Well, everything in this world is a compromise, including us. We all make unnecessary noise, so do pixels. When light from the lens hits a pixel it puts out an electronic signal, proportional to the amount of light striking it. But, there is also a residual signal in a pixel, that is, a signal that it puts out whether or not light is hitting it. This is called noise. This is on top of the wanted signal, and the lower the brightness of the image, the greater the noise appears. Thus, it shows up more in photos taken in dim light. But it's always there, and in all cameras. It appears more obvious in areas of smoothness, such as sky, or human skin, and causes the image to look somewhat rough or granulated. (To those who are used to film, it's more or less the equivalent of grain.) Altogether, noise is something really undesirable.

What's the easiest way to reduce the amount of noise in a pixel? Easy, make it bigger! Now, do you see the conflict? If we make the pixels bigger to reduce noise, then we have to have fewer of them on a given size sensor. Or, we can have bigger

**MERRY CHRISTMAS AND
HAPPY NEW YEAR
FROM CENTRAL MAINE**

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KVCS MEETINGS **General Membership**

The program for this months meeting will be The Annual Meeting and Holiday Party
Thursday, December 8, 7:00 PM
Buker Community Center on
Armory Street, just off
Western Avenue near the
National Guard Armory in
Augusta.

Board of Directors Meeting

The next meeting will be held
Wednesday, December 21, 6:00 PM
at Lisa's Restaurant,
Bangor Street, Augusta

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www.kvcs.org

Click the link for more information about KVCS.

Bob Wells, our webmaster is suggesting you make it the opening page for your web browser so you get the latest announcements.

KVCS

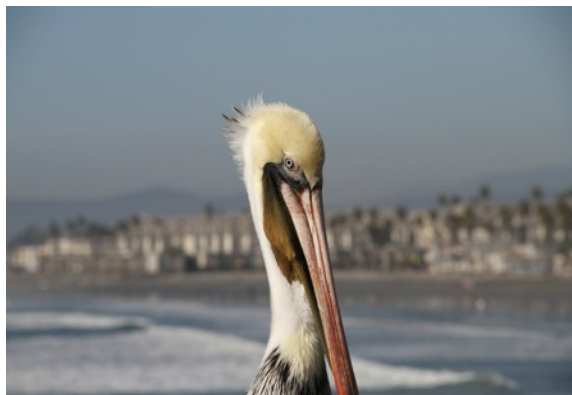
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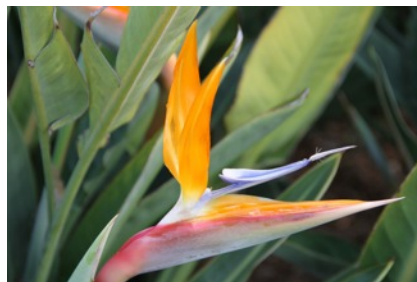


**Pelican on it's way to go fishing.
Taken off the Oceanside, California pier November 25, 2011**



This is 'Charlie' who is keeping a close eye on me. 'Don't you get too close to me with that camera or I'll do something.....'

These birds look so awkward when sitting on the pier railings but in flight they are very quick and graceful. They are probably some of the most photographed birds in the world, what with all the people who come out onto the pier. Their favorite place is right next to the bait shack halfway out on the pier. They wait patiently for a free fish. If those are not forthcoming they go out to see what they can get.



Bird of Paradise. Lots of them in bloom now. I don't know the scientific name for them but they are very colorful and exotic. Definitely not a Maine plant...!

A Tablet for the Holidays

By Vinny LaBash,
Regular Columnist,
Sarasota PCUG, Florida
November 2011 issue,
Sarasota Monitor
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The first thing you need to know about buying a tablet is that you are not going to get top dollar performance for a bottom dollar price. You get what you pay for. Buying one of these devices based on price is a guarantee of disappointment. Deciding on which tablet to buy, either for yourself or as a gift, should depend generally on what you plan to do with it.

Most people who buy these devices have some mixture of the following in mind: playing games or computer-specific tasks. E-readers do one thing very well; they are designed for reading magazines and books. Barnes and Noble's Nook Color has a seven inch multi-touch screen which is also great for web browsing and playing casual games. Bejeweled looks spectacular and the traditional Microsoft games work well. You can play Angry Birds too.

A nice feature is the ability to read magazines in full color. It's a much more satisfying experience than traditional black and white even though it doesn't improve content. The Nook Color is great for watching short videos. Even the biggest smart phone screen can't come close to matching it.

Amazon is scheduled to release an updated version of its Kindle e-reader in time for the holidays. It's not available now so we can't

comment on it. What we can say is if an e-reader is something you are interested in, be sure to check out Amazon's new product before buying.

If you are sure you want a tablet, resolve to get a good one or don't bother. If you end up with a cheap underpowered unit with too little processing power or memory to save money, you will end up frustrated for as long as you own the device. You want a processor with a speed greater than 1GHz, lots of memory, and a responsive touch screen.

Good specifications are a must, but they are not the whole story. The decisive factor should be about how the tablet fits to the way you want to use it. If you're considering an Android device, get your apps from the official Google Android Market. It's the only way to be sure that the app is properly integrated with the Android software.

With seemingly every manufacturer on the planet trying to knock off the iPad, new ones are appearing in the marketplace almost daily. There is no way to keep track of all of them, so if you're dying to know what your options are, here is a general overview of the tablet landscape.

The iPad is king and unlikely to be dethroned in the near future. This tablet requires almost no learning time, and its ease of use remains unsurpassed. The number of apps, games and media available for it far exceeds that of any other competitor. It was designed as a cloud computing device, which means that data is not stored on it, making it inherently secure. You should try it before making any final decisions.

Android-based tablets offer the next most widely available set of alternatives if the iPad's price, size or capabilities fail to meet your requirements. They are also cloud based devices making them perfect for retrieving information anywhere an internet connection is available.

Tablets running Windows software have been around for over a decade. They continue to improve and evolve, but they are still inferior to the iPad and Android systems. They resemble laptops more than anything else with their wide variety of physical keyboards. If a Windows environment is what you're looking for, look no further. Microsoft plans to release Windows 8 sometime next year, and perhaps that will be the catalyst to propel these systems to a more prominent place in the minds of potential customers.

Before being carried away with the immersive experience of a tablet, it may be wise to consider why they might not be right for you. If you like the portability of a smart phone especially the ability to carry it in your pocket, that's an experience you won't get with a tablet.

Laptops have far more horsepower than the most powerful tablet. If power is what you need, a tablet may let you down. If computer power is your heart's desire, an inexpensive laptop is probably a better choice.

Common shortcomings among most tablets is lack of a replaceable battery, poor printer support, and awkward virtual keyboards. In addition, lousy business software smudgy screens, and compatibility

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Shut down, Sleep, Hibernate Which one, when and why?

By Phil Sorrentino, President,
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November 2011 issue,
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Shut-down is pretty straight forward, it removes power from your computer and ensures that the next time the power is turned on, the computer will go through the normal “boot up” process. Sleep and Hibernate are different and are “Powered Down” modes. The reason for using one of these powered down modes will differ depending on the type of computer, desktop or laptop, and the need to quickly get back to the operating mode after a pause in operation. Power usage, though always important, is mostly a consideration when using a laptop. How much operating time, before the batteries must be recharged, can be a big consideration for a laptop user. It can determine how useful the computer may be on a long flight, or how many movies the kids can watch on a cross-country road trip. Even with desktops, the increased cost of electricity can become a key factor for customers who are under pressure to manage their total cost of ownership (purchase price plus operating expenses).

The hardware that makes up today’s laptops has gotten quite efficient and the Windows Operating System software’s ability to manage that hardware’s power usage has constantly been improved. One of the biggest improvements since the early 1990’s has been the addition of these power down modes, to help provide longer battery life.

Improvements in battery technology has greatly increased battery capacity as well as battery lifetime. Besides improvements in battery technology, the Operating System control over the hardware can also improve the battery life. A job for the Operating System is to make the system as efficient as possible while still maintaining an acceptable user experience when turning the system on and off. (With the advent of Solid State Devices, in place of disk drives, we will eventually get to a very fast on and off experience. You can actually have it now, but it is very costly. By the way, try a tablet PC and see how fast it turns on and off; no moving parts in a tablet PC.)

The Windows 7 power management goals are simple:

- 1) make turning a computer off/on as reliable, simple, and fast as turning a TV off/on, and
- 2) maximize the battery usage if on battery, and reduce the energy consumption if on A/C power.

The first goal involves changing the model for what “off” and “on” really mean. By now, most everyone knows that turning a TV off doesn’t *really* turn it *off*. It is still available to receive the remote control signal, so that it can come back on quickly. To the degree possible, “off” is really “sleep”, in Windows. When a PC goes into the sleep mode, the system state is saved in RAM; part of that 2 or 3 Gigabytes typically available in modern PCs. This arrangement creates the best balance between speed of resuming operation, and lowest power usage.

Currently, Windows 7 defines three

power-down modes:

Sleep – a power-saving state that allows a computer to quickly resume full-power operation (typically within several seconds) when you want to start working again. Putting your computer into the sleep state is like pausing a DVD player—the computer immediately stops what it’s doing and is ready to start again when you want to resume working.

Hibernate – a power-saving state designed primarily for laptops. While sleep puts your work and settings in memory and draws a small amount of power, Hibernation puts your open documents and programs on your hard disk, and then turns off your computer. Of all the power-saving states in Windows, hibernation uses the least amount of power. On a laptop, use hibernation when you know that you won’t use your laptop for an extended period and won’t have an opportunity to charge the battery during that time.

Hybrid Sleep – is designed primarily for desktop computers, is a combination of sleep and hibernate—it puts any open documents and programs (the system state) into memory and onto your hard disk (so nothing can be lost if power goes out), and then puts your computer into a low-power state so that you can quickly resume your work. That way, if a power failure occurs, Windows can restore your work from your hard disk. Normally, when the user returns and “wakes” the machine, the system state is just restored from RAM, and the responsiveness to the user is fast. However, if for some reason power is lost (for example, if the PC is unplugged to move it - like you might move your TV), the system can still resume from the system

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Streaming Video Presentation

by Mike Kaltschnee

Meeting review by Richard Corzo,
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November 2011 issue,
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Perhaps you've heard of people "cutting the cord," getting rid of their cable or satellite TV subscription, and relying on the Internet to watch television programming. Maybe you just want to catch up on episodes that you may have missed, or be able to watch Movies that aren't available from your cable or satellite provider.

Mike Kaltschnee explained the options, both services and devices you can hook up to your TV. He is well known for his web site www.HackingNetflix.com. So of course he mentioned Netflix, which has both a video streaming service and DVD rental by-mail service. The streaming service seems to be available on every TV, Blu-ray player, and game console; along with all the streaming devices he showed us, and a Windows PC or Mac.

Hulu and Hulu Plus is another service featuring mostly TV programs, and come in both free and paid versions. Amazon offers streaming through its Amazon Prime offering, as well as a huge selection of video on demand titles. HBO Go is available only to HBO cable subscribers, but lets you watch shows on portable devices and selected set-top boxes.

Blockbuster is similar to Netflix in offering both streaming and DVDs by mail. However, the streaming

option for now requires a Dish satellite subscription. You can select from the various options based on the service's selection of titles, price, how often you watch, and what devices they support.

To find where particular titles may be offered, Mike mentioned TV Guide (<http://www.tvguide.com/>), Fanhattan (<http://www.fanhattan.com/>) which has an iPad application and will soon offer a website guide, and clicker (<http://www.clicker.com/>), the "Internet Television Guide."

To watch Internet TV on your television, you could hook up your Windows PC or Mac with an HDMI or VGA cable, or use your game console. Your TV itself or Blu-ray player may offer some of these services. You might also want to watch TV on your portable devices, phone, iPad, etc.

Finally, there are dedicated streaming boxes such as the Roku, Boxee, Apple TV and Google TV. A TiVo combines a DVR with an offering of Netflix, Hulu Plus, mazon Video on Demand, and Blockbuster.

The Sony Dash was an interesting device I wasn't familiar with, and has a built-in screen. So there are a lot of options, and we're no longer limited to cable or satellite TV.

I am conflicted on Internet streaming of television. Cable, satellite, etc., package a lot of stuff that you are not interested in. They will never do ala carte which is essentially what you can do with Internet streaming. I have a wife that would not tolerate having to go through a dozen

-Power to the Pixels - continued

sensors. This method definitely works, but at a price. A bigger sensor means a bigger camera, and a higher price. Large sensors are expensive, huge sensors ridiculously so. (A giant sensor or a new car, your choice!) There is software in cameras designed to analyze the noise and reduce it. It works, but it has limitations distinguishing between noise and signal. Software packages can be purchased at varying price levels to reduce noise, they help but don't cure the noise problem, if you want to get into that.

You would think that camera manufacturers, being aware of the problem, would design their cameras to have a reasonable compromise between sensor size and number of pixels. The designers could, but specifications are given by the marketing group, who are well aware that "Pixels sell!" So, what should you do?

Well, consider how you are going to use your photos. Are you going to print 16" x 20" photos on high resolution glossy paper? Are you going to crop out an itsy-bitsy portion of the center of the picture and enlarge it? If so, I'm afraid you will have to bite the bullet and get a larger sensor camera. But if you are taking photos of birthday parties, vacations, and get-togethers, and want to print them as 4x5's or e-mail them, then I wouldn't be too concerned about pixel counts. Maybe cuteness is more important.

different places to find what she wants to watch. To each his/her own....

-editor-

KENNEBEC VALLEY COMPUTER SOCIETY

Presents

Annual Meeting

And

Holiday Party



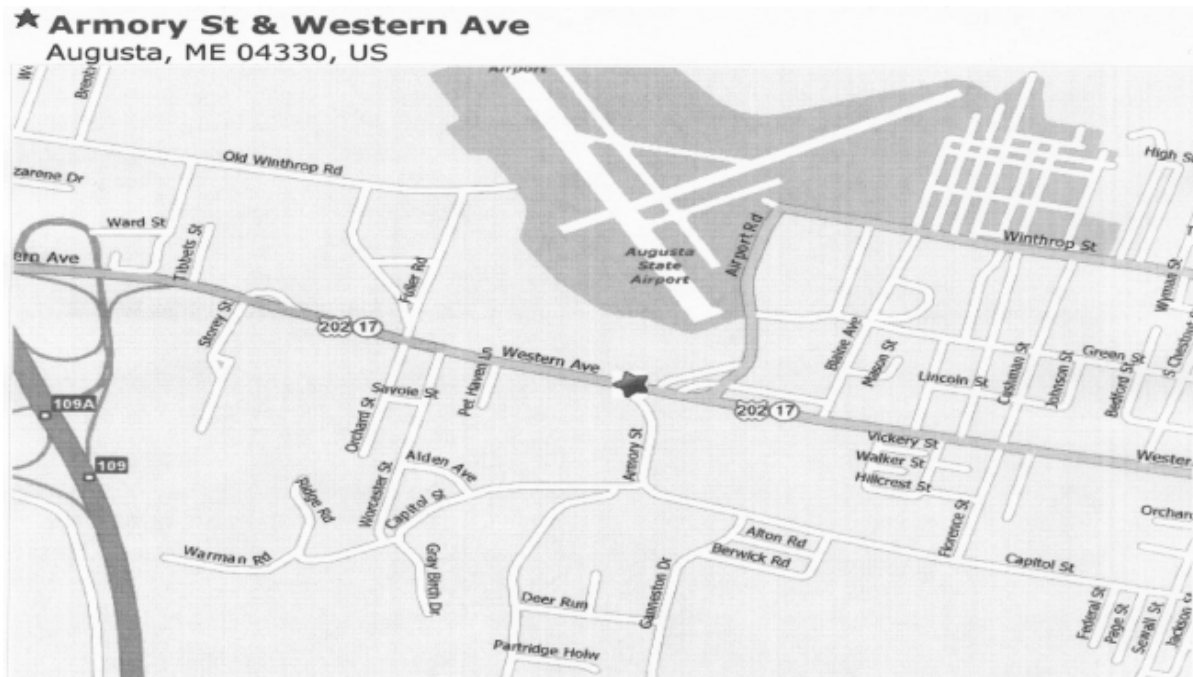
Thursday December 8 th 2010 - 7 PM
Social Time 6:30 to 7 PM

Lou Buker Community Center
Armory Street
Augusta, Maine

The Public is Cordially Invited

Bring a Friend, meet a friend

KVCS MEETING LOCATION



MELUG-Central Maine Linux Users Group Meeting

For more information www.melug-central.org

-Tablets - continued

problems with Adobe Flash are often cited among tablet users.

If your typical work day finds you heavily involved with creating and editing lengthy documents, large spreadsheets, PowerPoint presentations, and lots of email, visions of using a tablet productively may be delusional.

A high end tablet can go for around \$800. A decent laptop or smart phone can be picked up for less and probably do more. Forget price for a moment and take the time to evaluate what you expect from a tablet. Is it really a better value for you and a better fit than a good smart phone or laptop? If the answer is yes, then go for it.

-Power - continued

state previously saved to disk with all context and data intact. (When Hybrid Sleep is turned on, putting your computer into sleep automatically puts your computer into Hybrid Sleep. Hybrid Sleep is typically turned on by default on desktop computers.) While Hybrid Sleep can be used on a laptop computer, it isn't as applicable. A desktop is vulnerable to power loss, while a laptop can, of course, run on its internal battery.

So, although there is a lot going on to produce and provide the power down modes, there really isn't much to think about. For desktops, let it go into, or select, sleep (which should be hybrid sleep) and for laptops take

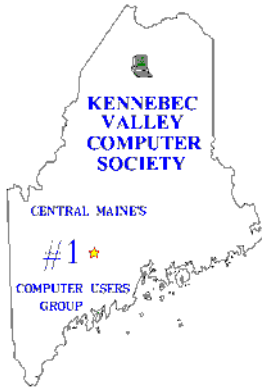
advantage of hibernate (your battery will thank you).

Editor's Note:

The articles on Power to the Pixels, Tablets, Shut Down, Hibernate or Sleep and the Streaming Video Presentation report are all courtesy of APCUG with all rights reserved. KVCS membership in APCUG provides this service to you.

May this season bring you peace, joy and happiness. From all of us to all of you our best wishes where ever you may be.

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Change of address

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