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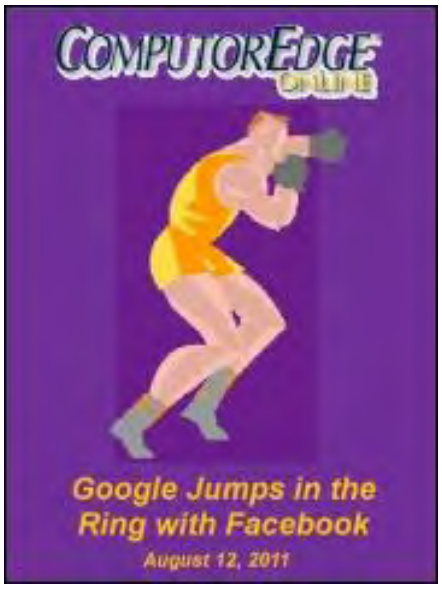

This issue:
Google Jumps in the Ring with Facebook

With 25 million beta test users, Google Plus is hoping to run social "Circles" around Facebook. Plus, Digital Dave talks about Internet data caps and video streaming.

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"Streaming Video," "Network Monitoring Software"

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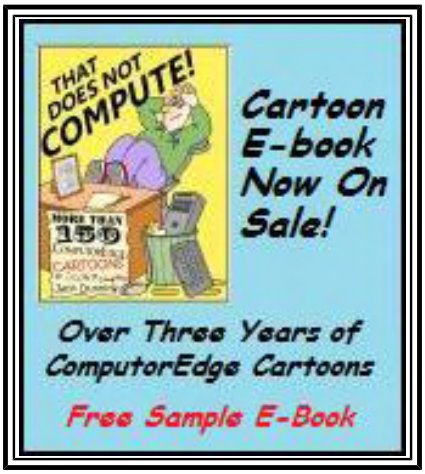

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Digital Dave

"Digital Dave answers your tech questions." by *Digital Dave*

Data Caps by Internet Service Providers (ISP); BIOS F1 or F2 keys.

Dave's Opinion on Data Caps

I noticed the comments and concerns expressed about data caps and the activities of Internet Service Providers at the end of Jack's article on video streaming and Netflix. It is certainly worth the time to take a look at what's happening and the likely outcomes.

For years, people have been purchasing broadband Internet services for their homes at a monthly rate. Normally, it has included unlimited Internet with bandwidth limitations. But other than an occasional download and some peer-to-peer activities, there are usually very little demands placed upon the purchased bandwidth. Surfing the Internet and e-mail place an insignificant load on the connection. People have been using only a tiny fraction of the service they had contracted.

As music and video streaming has become more popular, the volume of Internet use has exploded. Internet volume has increased 50% in the last year alone. One of the major contributors to this rapid growth is Netflix, which offers Internet streaming of movies. In the coming years, it's expected that Cloud computing will add even more to the demands on the Internet.

The ISPs are suddenly finding themselves in a position where their customers are actually taking advantage of the bandwidth they've purchased. Fortunately for the providers, while the usage may have increased by 50%, they have increased capacity by 60% through newer, more efficient technology.

Yet, many of these Internet providers see this increased usage as a threat to a couple of their core businesses—cable television and video on demand entertainment. Customers are using the Internet to bypass these services without paying any additional tribute. This irks most Internet providers to no end. For this reason, some (such as AT&T and Comcast) have instituted data caps. If a user goes over 150 or 250GB (depending upon the service) in one month there is an additional charge. This way the Internet provider can get an additional piece of the action. These types of caps have been instituted in the past, but the providers have usually backed off due to customer complaints.

The rationale used by the Internet providers is that their costs go up when there is increased usage. This is true to some extent, but nowhere near the rates they charge. In an article for The Globe and Mail (Canadian, but close enough) by Hugh Thompson, "What is a fair price for Internet service? (*www.theglobeandmail.com/news/technology/gadgets-and-gear/hugh-thompson/what-is-a-fair-price-for-internet-service/article1890596/print/*)," he states, "To find out what is a fair price, I contacted several industry insiders. They informed me that approximately four years ago, the cost for a certain large Telco to transmit one gigabyte of data was around 12 cents. That's after all of its operational and fixed costs were accounted for. Thanks to improved technology

and more powerful machines, that number dropped to around 6 cents two years ago and is about 3 cents per gigabyte today." The Internet provider's argument of increased cost doesn't hold water. If anything, they should be lowering the price.

While for many homes these data caps may seem to be at reasonable levels, over time more people will find that they are surpassing them. A standard streaming movie is about 600 to 700 megabytes. 720p HD streaming movies may be two gigabytes with 1080p resolution increasing to eight gigs or more. Add 5.1 surround sound and you get another 250 megabytes. This equates to about 30 hours of 1080p HD and 120 hours of 720p HD per month under an imposed 250 gigabyte data cap. 120 hours may seem like plenty for one family, but 30 hours of 1080p HD is a drop in the entertainment bucket—especially if you have multiple people and televisions in your house.

Note: Whether you can currently get 1080p with 5.1 surround sound from Netflix depends upon the streaming device you're using. Netflix does offer movies at 1080p, but they don't indicate which is on their site. I found this list of 1080 5.1 Netflix movies (*www.avsforum.com/avs-vb/showthread.php?t=1297186*) at AV Science Forum. Supposedly, if the movie is in 1080p, it also has 5.1 audio. I haven't checked this out myself.

(With the data packages offered with most smart phones, video streaming is a joke. If phone owners regularly squint at their phone to watch movies, they will soon find themselves paying exorbitant fees for additional Internet access.)

The fact is that people will be looking for Internet packages which go well beyond an arbitrary 250 gigabyte cap. There is a battle ahead for Internet providers who want to control their customers. Some are trying to figure a way to directly charge the services such as Netflix for access to their customers, but they will soon find themselves going up against the rest of the computer and Internet industry. Google, Apple, Amazon and others have their own programs and plans which include both video streaming and Cloud computing. It is unlikely that the providers will be able to pick and choose which services get access—including their own. The concept of "network neutrality (*en.wikipedia.org/wiki/Network_neutrality*)" (unfettered access to the Internet) has taken hold to the point where Congress takes a special interest if providers try to restrain particular content delivery. If the Internet service providers cause too many problems for their customers, they may find themselves getting controlled by the government, or even worse, cut out of the loop completely by the other technological giant. Ultimately, competition should sort it all out.

If you live in an area where you have limited choices for Internet service, then you may be temporarily stuck with AT&T or Comcast and their data caps. But in the long run more alternatives will become available, whether it is from local phone companies, satellite, or new Wi-Max networks which will bypass the need for costly cable networks. The future for many of the ISPs looks tough. Rather then innovating and taking a realistic view of the future, they are trying to squeeze out every last penny by changing the rules on their customers.

Dear Digital Dave,

Recently, my neighbor has been having problems with her computer. A virus made it necessary to reformat her laptop's hard drive. Not long after that, a spilled drink made a new keyboard necessary.

When starting the computer after the keyboard installation I had to make the decision of "pressing" the F1 or the F2 key to continue. I did that, but nothing happened. So I tried shutting the system down, then turning it back on and quickly tapping the F1 key, but nothing happened again. It wasn't until I actually held the F1 key down, when restarting the computer, that it finally produced some results.

The question is—If holding either the F1 or F2 key down when the computer is starting is the best way to "engage" those features, why isn't that fact really explained anywhere in the on

screen directions? (Those directions just mention to "press" the F1 or F2 keys.) Thanks and I really enjoy your magazine.

Jerry Hughes
San Diego, Ca.

Dear Jerry,

One reason it is not always explained is because it is not always the case. The rules for accessing the Basic Input Output System (BIOS) vary based upon the motherboard as well as the BIOS. Even the keys used to access the BIOS vary. (The proper keys are displayed in a boot up message, but sometimes it flashes by too quickly to see it.

I've found that on some systems it is necessary to hit the designated key a number of times, while with others it works best when you hold the key down as you did. Other times, I've found that depressing the key too soon, or holding it down will not work at all. It is not consistent for all computers.

Commonly, the F1, F2, F10, DEL, or ESC key is used. Sometimes a combination of keys is necessary. There are sites which list the correct combination by computer (*pcsupport.about.com/od/fixtheproblem/a/biosaccess_pc.htm*) and motherboard (*pcsupport.about.com/od/fixtheproblem/a/biosaccess_mb.htm*).

If not on one of the lists and you can't see the boot message, here are some of the alternative possibilities: F3, F4, F10, F12, Tab, Ctrl+Alt+F3, Ctrl+Alt+Del, Ctrl+Alt+Shift+Del (using Del from the keypad), Ctrl+Insert, and Ctrl+Shift +Esc, Fn+[any "F" function key] (on some laptops).

I don't find that I have as much need to make changes in the BIOS today as I did with older computers. Most of the functions can now be changed through operating system features. (The term BIOS is now generically used to refer to the initial program instructions embedded in flash memory even though it is no longer technically accurate for new systems which use EFI (Extensible Firmware Interface (*en.wikipedia.org/wiki/Extensible_Firmware_Interface*)).

Digital Dave

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Will Facebook Rule Social Media Forever?

“Facebook dominates right now, but Google may have some plans that will change the playing field.**”** by Jack Dunning

It is difficult to avoid Facebook, but it may not remain popular forever—much like MySpace is no longer the top social network. Google Plus has some advantages over Facebook that could potentially challenge Facebook.

Social Media: To be "common" or not to be "common," that *is the question?*

*Never before in history have the "common" (*1) people had so many ways to share their "common" thoughts and "common" feelings. With the advent of Social Media options such as Facebook, MySpace, Tweeting {see dictionary definition} (Twitting,! I mean twittering. (What is the sound of one twit twitting?)), ad nauseam, they can now share their "common" thoughts with millions of "common" friends in addition to their immediate circle of peers.*

*(*1) = "common", insert your own definition of common.*

Buck from El Cajon, CA

PS: (From a 62-year-old who doesn't use any of the above. Does that make me unsocial or "uncommon"?)

In many ways I share Buck's feelings. Yet as a grandparent, it has been difficult for me to avoid Facebook, the ubiquitous leader in social media with currently close to one billion members. I eventually had to join to get access to some photos of my granddaughter. Prior to that, from a personal level I had avoided all contact with social networking. I'm forced to admit that I do get

some interesting information from Facebook (sometimes too much) which otherwise I would miss. But, I'm not a regular user. I occasionally check in to see if there are any new pictures or comments about my grandchildren.

I now have a number of Facebook "friends." When I opened the account, a handful of people (mostly relatives) "friended" me. It's difficult to say "No!" to a "friend" request, unless, it is someone you absolutely don't know. I accidentally sent a friend request to someone with whom I had business interactions years ago (I clicked the wrong button). In spite of being a mistake, I couldn't later block the person since I sent the original request. Awkward!

Once you "friend" someone you see all of the comments that they make, no matter how mundane. While many people only post when they have some real news, some tend to leave a trail of their daily activities. It would be nice if there was a button that allowed you to be selective about whose posts appeared on your account.

Even worse you see the comments on a friend's post from people who are friends of the friend. This is very disconcerting. First of all, I don't know these people, yet I'm inadvertently eavesdropping on their conversations. Second, if I add a snide remark to a friend's post which only that person would understand it might be read by all their friends. You just don't know who is watching.

To be fair, the privacy settings on your profile can be customized to limit who can see what, but it's amazing how many people don't bother to implement these controls. A user can wander from person to person (friend to friend's friend to friend's friend's friend) and view their profiles, photos of their friends and families, and lists of all their friends. A great deal of information is unintentionally left exposed. This is one of the attractions for many lurkers. A person could spend endless hours wandering from photo link to photo link. It's actually kind of creepy to think about who might be seeing your stuff. It's like inviting strangers into your living room to go through your family albums.

Another issue with Facebook is the advertising. It's not surprising that there are ads, the bills need to be paid. It is the content and design of the commercial messages which is annoying. The ads shown at the left are an example of what may greet you on your page. (The ads depicted appeared on my home page on Facebook. I guess they're targeting me.) It's possible that the photos in the ads might even be mistaken for long-lost friends. This does not make for an appealing Internet experience.

I have my account pretty well hidden. If you do a search for me, you will get "Jack Dunning, Athlete", who was a New Zealand Cricketer. He passed away in 1971, so he's not "friending" anyone. That's not me. In spite of rumors, I'm still alive.

Facebook is a huge jungle swamp, sucking in new people on a daily basis. For many, such as myself, there is no choice but to join. If you're a hermit (with no friends or family) you may be able to avoid it. Otherwise, you will probably eventually give in.

Can Anyone Challenge Facebook?

Facebook is so huge that it seems inconceivable that anyone can challenge it as a social network. But the same thing was said once about MySpace, which has since been relegated to seeming obscurity by Facebook. If there is one solid truth about the technological age, it is that no computer or Internet business is guaranteed survival—even in the short-term. As unlikely as it may seem, people could become bored with Facebook. Or, even worse for Facebook, overnight the giant social network could become uncool for the younger people. Maybe because there are too many grandparents on it.

Even though Facebook has the momentum today, people could easily move to another social network. The social networks are mostly free and you don't need to drop one to join another. In any case, there is nothing preventing someone from belonging to multiple social networks. This means that any new network which can provide a compelling reason for people to sign-up will attract members. The only motivation for logging on to any of the networks is a compelling interest (i.e. people you know). Some sites, such as LinkedIn, seem to have huge membership (over 120 million claimed), but I'm not sure anyone actually uses LinkedIn for anything other than creating cyber connections to people they know. I'm a member, but never visit it. Plus, I've noticed a drop-off in the number of people who want to link with me. (There could be other reasons for that.)

Maybe Google Plus?

The latest entry in the social media market is Google Plus. It is still in beta and currently closed to new members, but it already has 25 million sign-ups. This is a testament to Google's marketing power. There are many more frustrated people who want to register, but they are told "leave your name and number and we'll let you know." At this point, you can't even get an invite from a friend who's already on the inside. This could be part of the plan, because growing too rapidly could outpace preparations, plus limiting sign-ups might keep them hungry to join. There is no word on when Google Plus will be opened to the rest of the world, but the speculation is soon (one month, two months, next year?).

For many, Google Plus might merely represent another social network, but for people who are fed up with security issues and other Facebook foibles related to its management and their lack of adult supervision, alternatives are viewed as welcome. This is not to say that Google is free of security problems, but people expect Google to handled them a little less capriciously.

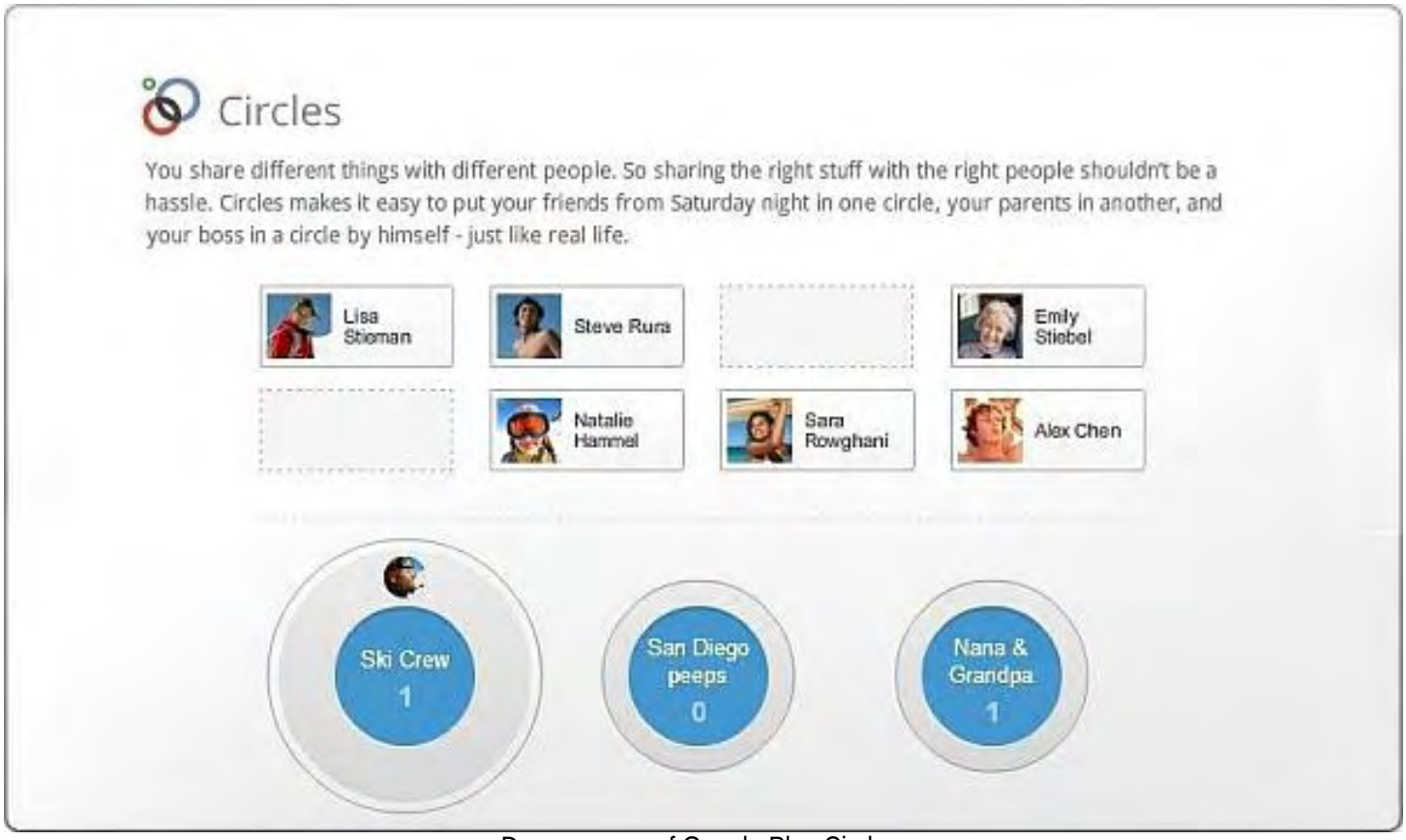
Google Plus Advantages

After watching the online semi-interactive demo and consulting with a Google Plus user, it seems that there are two primary motivations for adding Google Plus to your social networking. The first is called Circles.

Unlike Facebook where you either friend or don't friend someone, in Google Plus you can just add a person to your list—then they are notified. There is no agonizing over whether the person should accept or reject you—they are merely on your list. There is no awkward determination of whether someone is a friend or not. Their real significance to you becomes apparent when you place them in one of your Circles. Adding someone to one of the relationship circles you've created makes them part of an exclusive group. They have no particular way of knowing in which group or groups you have placed them. I believe that nobody can see who you've put in any of your other groups, or even what your groups are called. It is much like how you would classify your real life relationships in your head and not inform

everybody explicitly. One circle could be for family, another for buddies, and yet another for recalcitrant individuals who you want to isolate from everyone else. This is a significant difference from Facebook since you are given more control over who sees (or hears) what.

My contact who uses Google Plus said, "It's basically Facebook except you can organize people into groups and then decide to which groups any given message or content will be sent. I think [Google Plus] is better by far, mostly because of the circles. This is a feature that Facebook badly needs, but they don't seem to understand that even within friends you may not want everybody to see everything. Just being able to have both a professional and a personal circle would be a big deal for a lot of people."



Demo screen of Google Plus Circles.

Another feature which has some true potential is called Hangouts, a video conferencing system. My spouse and I have used Skype a good deal to visit with our grandchildren face-to-face. It would be interesting to get all of our grandchildren together at the same time from three different locations. It would most likely turn into a madhouse and never be repeated.

Demo screen of Google Plus Hangouts.

Google Plus also includes a feature called Huddle which acts as a group texting session within a Circle. It's designed for collaborating with your friends or associates via texting without sending multiple individual texts or tweeting the entire world.

There are a few other features touted such as, automatic "Instant Upload" of photos and video from your phone and integration with Picasa photo gallery and YouTube, both now owned by Google. And, of course, Google will be delivering advertising to you. Let's hope that it's done a little more tastefully than the Facebook Spam noted above.

Can Google take on Facebook? They certainly have the financial power and the technical know how. Now all they need to do is bring in the users. The only thing that makes people loyal to Facebook is the group of friends who are using it. If these friends start showing up at an alternative location, then all will follow. There is no need to make a decision between Facebook and Google Plus—they are both free. People can sign-up for each and the battle will be on. The winner will be determined by which one people actually use. I think even Buck from El Cajon could be tempted to join if a group of the right people sent him an invitation to be a member of their exclusive circle.

Jack is the publisher of *ComputorEdge* Magazine. He's been with the magazine since first issue on May 16, 1983. Back then, it was called *The Byte Buyer*. His Web site is *www.computoredge.com*. He can be reached at *ceeditor@computoredge.com*

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Wally Wang's Apple Farm

“Apple's Money” by Wally Wang

Apple's money; the FBI's Child ID app; iBooks for the Mac?; Apple encourages more convoluted thinking; skyrocketing iPad sales; operating system struggles; Lion Recovery Disk Assistant; identify your Macintosh.

Apple has more cash in the bank (*www.thesun.co.uk/sol/homepage/news/3723373/Debt-crisis-engulfing-US-government-has-left-it-with-less-ready-cash-than-computer-giant-Apple.html*) than the United States government, which either tells you about the business savvy of Apple and/or the total incompetence of the American government. Toss in the billions that Microsoft and Cisco have in the bank and the combination of Apple, Microsoft and Cisco have more money than the entire output of Mexico. When companies are worth more than entire nations, something seems drastically wrong with the way governments run.

MarketWatch raises an interesting idea about how Apple could solve the debt crisis (*www.marketwatch.com/story/how-apple-would-solve-the-debt-crisis-2011-08-02*) of the United States. Instead of continually innovating, the government, much like stagnant companies, simply "lose their entrepreneurial spirit. They stop looking at the future. They get intimidated. They quit fighting. They look for a sale. They try to buy growth. They play not to lose—and end up losing anyway."

"Which of those does Washington sound like?"

When even Microsoft can stumble, throw away billions on "investments" in the Xbox, Kin and Windows Phone 7 phones, and Bing, yet still remain profitable, the governments of the world look even more incompetent as they cut back on public services while steadily increasing taxes. This would be like Blockbuster Video charging higher rental fees while cutting back on inventory of the latest DVDs to save money, and then wondering why their business continues spiraling down even faster than before.

MarketWatch claims that the government has taken on a defeatist attitude. Instead of trying to find ways to increase profits and revenue, the government, like dying companies such as Kodak, just look for ways to keep cutting costs until they're unable to do anything any more.

Every company needs to cut costs, but if that's your only strategy for balancing your budget, there comes a point where you can't cut any more costs without being totally ineffective in what you offer in the first place. Borders Bookstore kept cutting costs until their assets are worth more than keeping the business going. Cutting costs is a defensive measure. To win, you need an offensive strategy as well, and that's where innovation comes in.

Fast Company lists 50 of the most innovative companies in 2011 (*www.fastcompany.com/most-innovative-companies/2011/*) with Apple number one, Twitter number two, Facebook number three, Google number six, and Microsoft at thirty-seven. Not surprisingly, dying companies like Borders, Blockbuster Video, Research in Motion and Nokia are nowhere on this list.

If you study this list of innovative companies, you'll notice a pattern. Innovative companies don't just cut costs, but constantly look for ways to increase revenue and break new ground. Even Microsoft, which has all the corporate dexterity of a crippled hippopotamus on ice skates, isn't afraid to search out new markets. Their many misses (Microsoft Kin, Windows Phone 7, Microsoft Stores, Vista, etc.) means they'll occasionally have a hit, such as their Kinect motion controller (*www.tgdaily.com/hardware-features/54852-surgeons-use-kinect-to-speed-up-cancer-surgery*), which surgeons in a Canadian hospital are now using to provide doctors with a hands-free, sterile environment for manipulating patient images.

Innovation may be fraught with failures, but those failures are often stepping stones to success. Innovative companies produce something that people want. Non-innovative organizations just cut costs, offer less, but charge more. Given the vast difference between innovative companies and directionless organizations like world governments and short-sighted companies like Nokia and Research in Motion, is it any wonder who has more money in their bank account?

The FBI's Child ID App

According to the FBI, a child goes missing (*www.fbi.gov/news/stories/2011/august/child_080511/child_080511*) every 40 seconds. To help find missing children, the FBI has now introduced their first iPhone app.

Basically the FBI's free app lets you store pictures and descriptive information about your child ahead of time. Now if your child suddenly goes missing, you can e-mail this information to the authorities right away. Rather than trying to find a child based on a vague description, the police can view the identifying characteristics of your child and see an actual photograph of the missing child with just a tap of your iPhone.

Figure 1. The FBI's Child ID app for the iPhone.

If you have a small child, consider using the FBI's Child ID app. The thought of ever having to use it may make you cringe, but if you do need such critical information in a hurry, it's better to be prepared ahead of time. The FBI's Child ID app is just one more example of how smartphones continue changing our lives, hopefully for the better.

iBooks for the Mac?

Early next year, Walt Disney is going to release a movie called *John Carter*, which is based on the Martian fiction

series by Edgar Rice Burroughs, the creator of Tarzan. Since the *John Carter of Mars* series of books aren't as well-known as Tarzan, they may be difficult to find in one of the few remaining bookstores left in your area. To get around this problem, simply search for the EPUB version of these books on the Internet, starting with the first John Carter book called *A Princess of Mars (*www.gutenberg.org/ebooks/62*).*

It's easy to read EPUB books on an iPhone or iPad using the iBooks app, but if you want to read an EPUB book on your Macintosh, you may need to find an EPUB reader (*www.jedisaber.com/ebooks/readers.asp*). However, Apple is reportedly creating an iBooks version for the Macintosh.

Combine iBooks on the Mac with iBooks on your iPhone and iPad, you'll be able to read any EPUB book on any device and iCloud will synchronize your bookmarks through all your Apple devices. Start reading *A Princess of Mars* on your iPad, continue reading on your iPhone when you're stuck in line somewhere, and then finish reading that same EPUB book back home on your Mac.

Right now, such synchronization only works with the iPhone and iPad, so you'll have to wait for Apple to release iBooks for the Mac. Until then, you can read *A Princess of Mars* so you can compare the novel to the movie (*www.youtube.com/watch?v=6Rf55GTEZ_E*) when it's finally released in March 2012.

Apple Encourages More Convoluted Thinking

Acer founder, Stan Shif, claims that tablets like the iPad and ultrabooks like the MacBook Air are nothing more than short-term fads (*www.digitimes.com/news/a20110805PD206.html*). In the meantime, Acer is trying to sell their Iconia Tab in the tablet market and a new ultrabook PC model (*www.ghacks.net/2011/06/01/acer-announces-plans-to-launch-ultrabook-pc-model/*) by the end of the year.

When Research in Motion announced their Playbook tablet, they promoted it under a campaign declaring that "Amateur Hour is Over (*www.mobileindustryreview.com/2011/05/the-playbook-arrives-amateur-hour-is-over.html*)," implying that the iPad was an amateur product but now everyone could enjoy the professional tablet quality of the Playbook. Sales of the Playbook remain mediocre at best.

Figure 2. Research in Motion declares that with the Playbook, "Amateur Hour is Over."

In marketing the TouchPad, Hewlett-Packard's European chief, Eric Cador, said that "In the tablet world, we're going to

become better than number one. We call it number one plus (*news.cnet.com/8301-13506_3-20065265-17.html*)." After the TouchPad's launch on July 1 and the less than stellar reaction of the world, Todd Bradley claimed that the July 1 launch was a soft launch and July 17 was its real launch (*www.webosroundup.com/2011/07/bradley-real-hp-touchpad-launch-begins-july-17-ota-update-coming-in-ten-days/*). Of course that date has come and gone and the TouchPad still hasn't attracted massive publicity or sales.

Why so many companies feel compelled to boast about a product that fails to deliver on their promises remains a mystery, especially when the people doing the boasting are typically top executives earning six or seven-figure incomes, yet come across no better than ignorant children.

In Edgar Rice Burrough's ninth novel of the John Carter series, titled *Synthetic Men of Mars*, the hero runs across a race of Martians called Goolians. After observing the Goolians, the hero remarks, "They were without doubt the most useless race of people I had ever encountered, expending practically all their energies in boasting and little or none in accomplishment."

Perhaps if the first "John Carter" movie does well, Walt Disney will turn this ninth novel into a movie as well. Then they can fill it with Acer, Hewlett-Packard and Research in Motion executives to play the part of boastful, yet useless Goolians, which should be easy since these executives won't have to do any acting besides playing themselves.

Skyrocketing iPad Sales

Deutsche Bank recently tracked sales of notebook computers by the six largest vendors including Apple Acer, and Dell. As sales of Windows PC laptops seems to fade, sales of Apple notebooks dramatically increases by counting the iPad as a notebook computer.

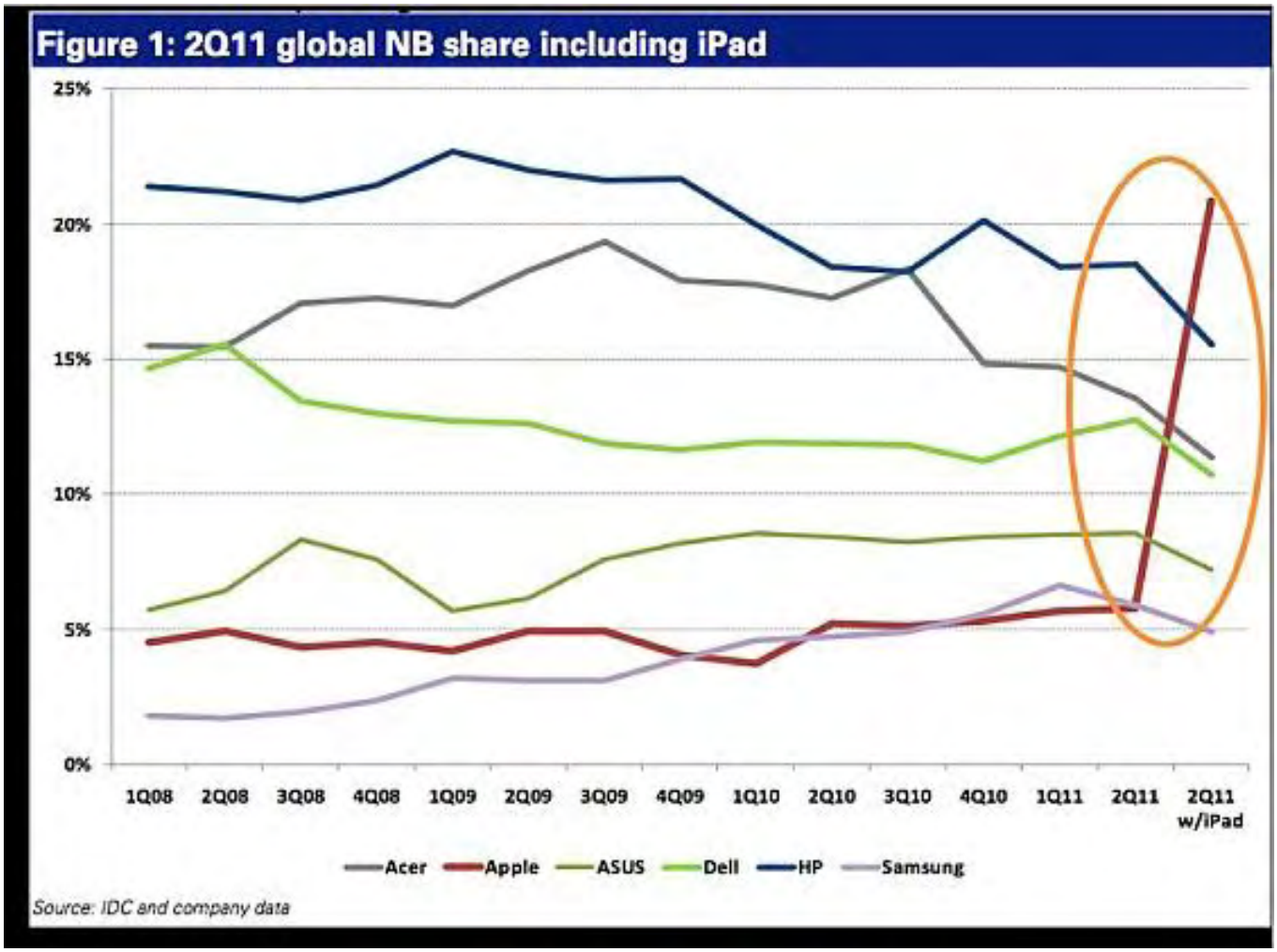

Figure 3. Apple's notebooks and iPads are selling better than rival products.

Chris Whitmore of Deutsche Bank says, "Within the computing market, we see significant opportunity for Apple to take meaningful share in the second half as the Microsoft/PC ecosystem is relatively stagnant, lacking meaningful new offerings...As such, Apple appears particularly well positioned for more share gains heading into the back-to-school and holiday selling season."

With new products like Thunderbolt-equipped Macintosh computers along with the release of Mac OS X10.7 Lion, Apple has refreshed practically their entire product line-up. In the meantime, Windows PC manufacturers have to wait until late next year for Windows 8 to arrive and generate any kind of excitement for the PC market.

By early next year, Apple will release their third version of the iPad, while Microsoft will counter with their first version of Windows 8 tablets. Can Windows 8 encourage more people to buy Windows laptops and tablets instead of the iPad and Macintosh laptops like the MacBook Air? If not, the next chart from Deutsche Bank should show the same trends accelerating to the detriment of nearly every PC manufacturer as they watch netbook and laptop sales shrivel up and wither away.

Operating System Struggles

If your favorite software isn't compatible with Mac OS X 10.7 Lion, then wait before updating your operating system. After all, there's no point in updating to Lion if you can't use the programs you need.

Lion also has another disturbing tendency. Open Safari and try to view a Flash video on a site such as CNN. Chances

are good that Lion will lock up. Just turn your Macintosh off and turn it back on again, and with Lion's Resume feature, all your program windows will look exactly the way they did before Lion locked up, so you won't lose anything important. If you need to watch Flash videos in Lion, use a different browser such as Opera.

If you're one of a handful of Windows Phone 7 users, it might be time to abandon this operating system altogether. Charlie Kindel, the General Manager of Microsoft's Windows Phone group has announced he's leaving the company (*www.electronista.com/articles/11/08/08/windows.phone.gm.charlie.kindel.quits/*). While this in itself doesn't spell the death knell of Windows Phone 7, Microsoft's shrinking share of the mobile phone market indicates that Windows Phone 7 sales aren't keeping up with defections from Microsoft's older Windows Mobile phone operating system.

With Microsoft promoting Windows 8 for mobile devices like smart phones and tablets, the future of Windows Phone 7 looks bleak as Windows 8 may be poised to take it over. Yet a study for Professor Dennis Gallatta at the Harvard Human Factors in Design lab recently concluded that the iPhone and Windows Phone 7 are the easiest smart phones to use (*www.phonearena.com/news/Phone-usability-study-finds-iPhone-and-WP7-easier-than-Android-or-BlackBerry_id21019*) with Android and Blackberry trailing behind.

In the world of Android, Google is trying to bury two e-mail messages that may indicate that they willfully infringed (*fosspatents.blogspot.com/*) on Java's patents. One message to Google's executives state, "We conclude that we need to negotiate a license for Java under the terms we need."

A second message offers two options for dealing with the potential Java licensing issue with one option being, "Do Java anyway and defend our decision, perhaps making enemies along the way."

Willfully infringing on patents is much different than inadvertently infringing on another company's patents, which places Android on shaky legal ground. If Oracle wins their lawsuit against Google, Google will need to pay them damages plus allow Oracle to extract royalties for anyone using Android. Combine Oracle's royalties with Microsoft's current royalties from Android patent infringement and Android's future looks less secure by the second. If smart phone manufacturers like Samsung and LG Electronics have to pay royalty fees to Microsoft and Oracle to use Android, how attractive will Android continue to be as a "free" operating system?

Lion Recovery Disk Assistant

When Apple announced that Lion would only be available through the Mac App Store, that eliminated the need to manufacture and distribute a bunch of DVDs in a fancy package. However, it also made the prospect of recovering a Macintosh much harder.

Typically when a computer crashes completely, you can just insert a DVD and reinstall the operating system all over again. With Lion, it's impossible to do that since if your Macintosh crashes, you won't be able to start it up in the first place.

To get around this problem, Apple now offers their Lion Recovery Disk Assistant (*support.apple.com/kb/DL1433*), which lets you save Lion on an external drive such as a USB Flash drive or an external hard disk. Now if your Macintosh dies completely, you can use this external device to reboot and repair your Macintosh.

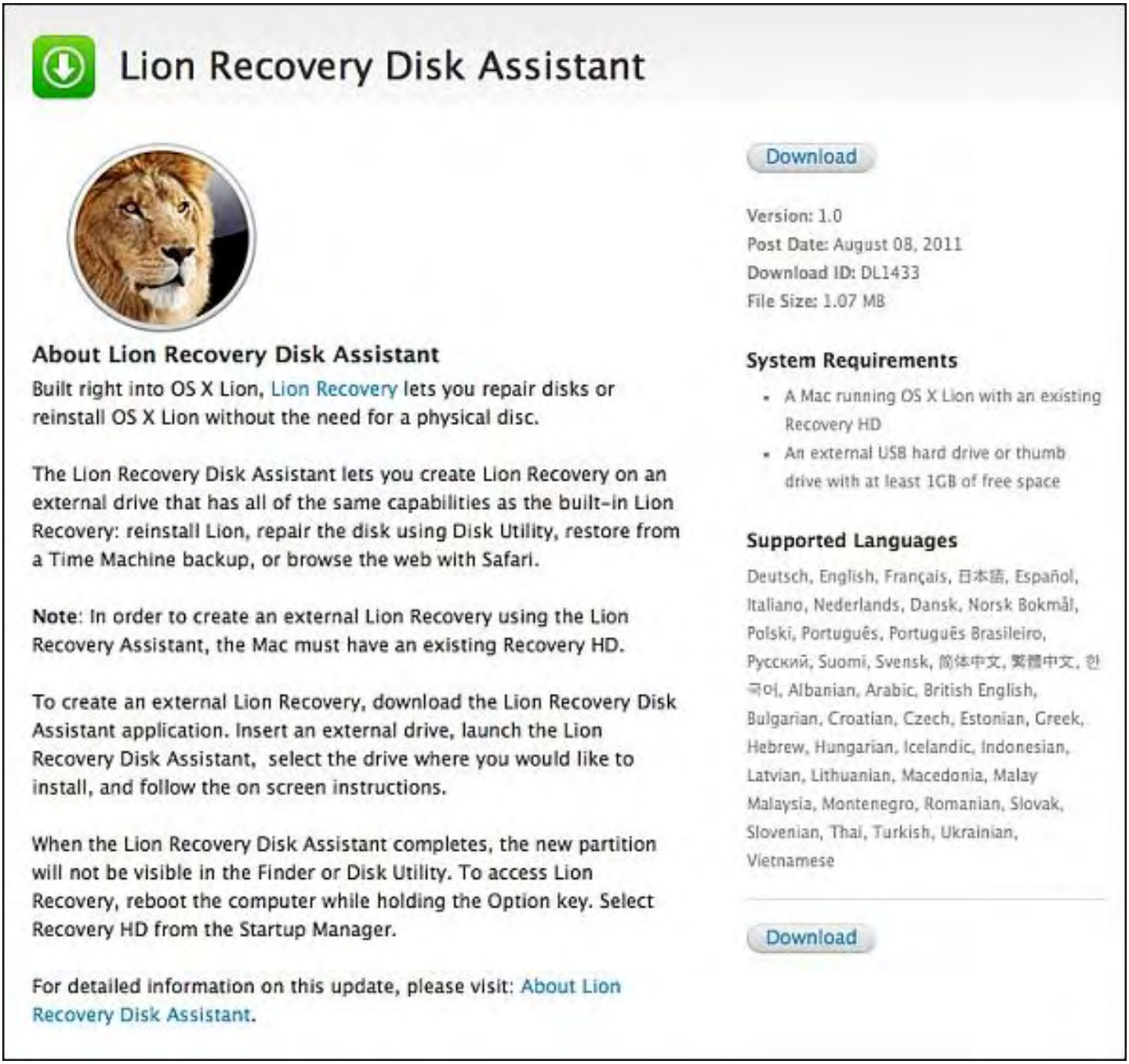

Figure 4. Download the free Lion Recovery Disk Assistant.

* * *

There are so many different Macintosh models out there that if you tell someone you have an iMac, they have no idea exactly which ports and equipment your particular iMac might have. You could have an iMac with an Intel Core 2 Duo processor or one with an Intel Core i5 processor.

To make this process of identifying your particular Macintosh easier, click the Apple menu and choose About This Mac. A dialog pops up that displays a More Info button. Click this More Info button and another window appears, giving a description of your particular Macintosh computer such as an iMac 21.5-inch Mid 2011 model.

Figure 5. The About This Mac window identifies a specific Macintosh model.

If you click the Memory tab in the upper left corner of this window, you can see how many memory slots you might have open and how much memory you already have filled. Now you'll know which types of memory chips to buy and whether you can fit them into an empty slot or need to replace your existing memory chips with newer ones.

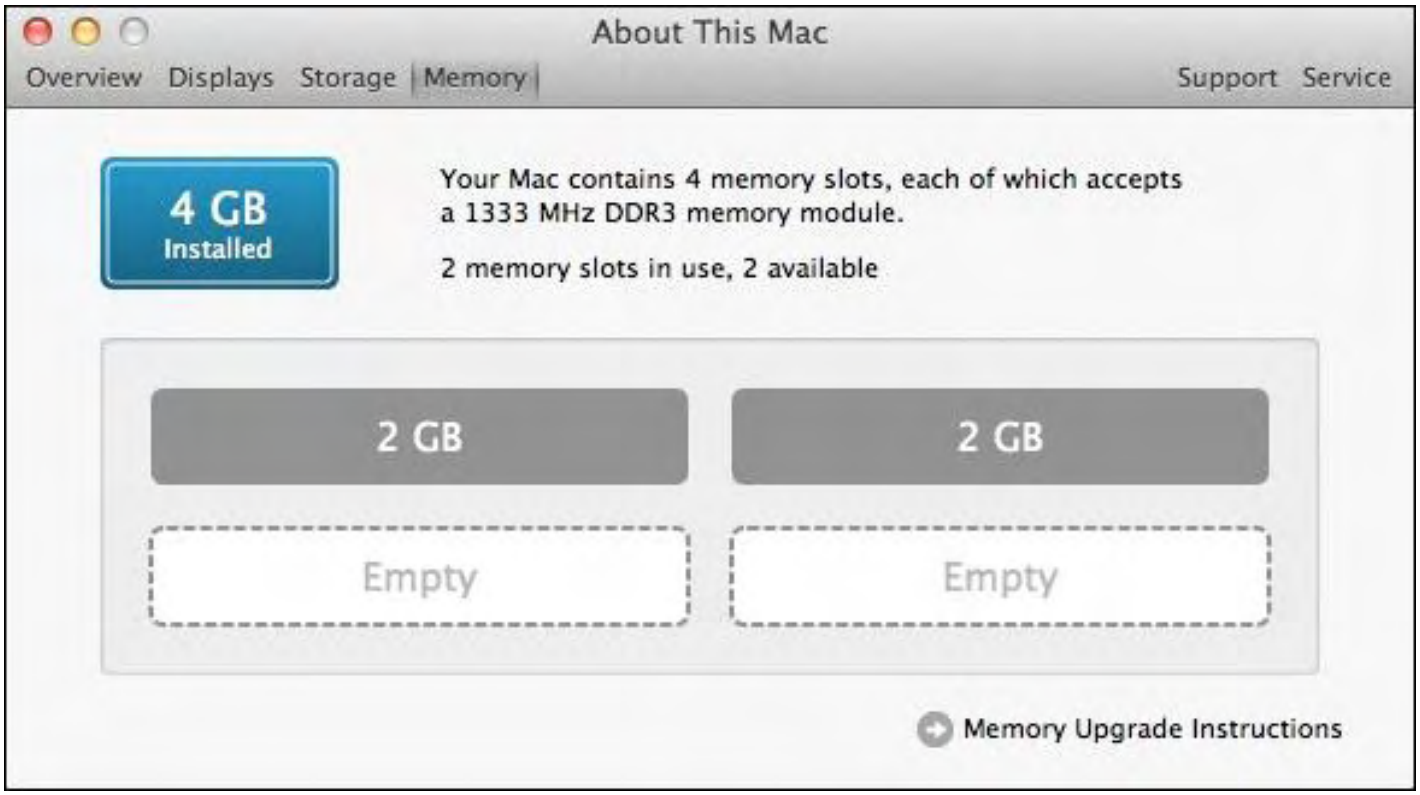

Figure 6. Your Macintosh can identify exactly the type of memory chips it can use.

In the early days, before Wally became an Internationally renowned comedian, computer book writer, and generally cool guy, Wally Wang used to hang around The Byte Buyer dangling participles with Jack Dunning and go to the gym to pump iron with Dan Gookin.

Wally is responsible for the following books:

My New Mac (*www.amazon.com/gp/product/1593271646?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271646*),
My New iPhone (*www.amazon.com/gp/product/1593271956?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271956*),
My New iPad (*www.amazon.com/gp/product/1593272758?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593272758*),
Steal This Computer Book 4.0 (*www.amazon.com/gp/product/1593271050?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1593271050*),
Microsoft Office 2010 for Dummies (*www.amazon.com/gp/product/0470489987?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470489987*),
Beginning Programming for Dummies (*www.amazon.com/gp/product/0470088702?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470088702*),
Beginning Programming All-in-One Reference for Dummies (*www.amazon.com/gp/product/0470108541?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0470108541*),
Breaking Into Acting for Dummies with Larry Garrison (*www.amazon.com/gp/product/0764554468?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=0764554468*),
Strategic Entrepreneurism with Jon Fisher and Gerald Fisher (*www.amazon.com/gp/product/1590791894?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1590791894*),
How to Live With a Cat (When You Really Don't Want To) (*www.smashwords.com/books/view/18896*).
Mac Programming For Absolute Beginners (*www.amazon.com/gp/product/1430233362?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=1430233362*)
The 15-Minute Movie Method (*www.amazon.com/gp/product/B004TMD9K8/ref=as_li_tf_tl?ie=UTF8&tag=the15minmovme-20&linkCode=as2&camp=1789&creative=9325&creativeASIN=B004TMD9K8*)
In his spare time, Wally likes blogging about movies and writing screenplays at his site "The 15 Minute Movie Method" (*www.15minutemoviemethod.com/*) along with blogging about electronic publishing and how authors can take advantage of technology at his site "The Electronic Author." (*www.wallacewang.com*) Wally can be reached at *wally@computoredge.com*.

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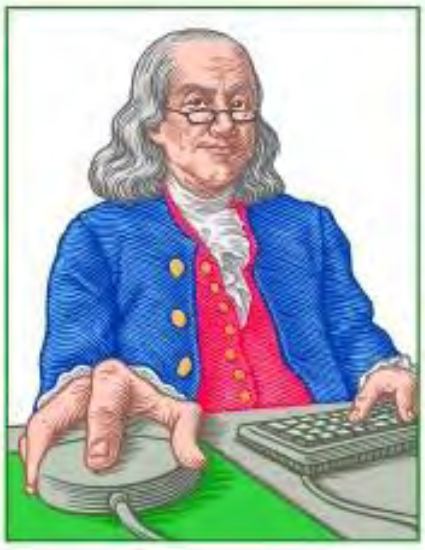

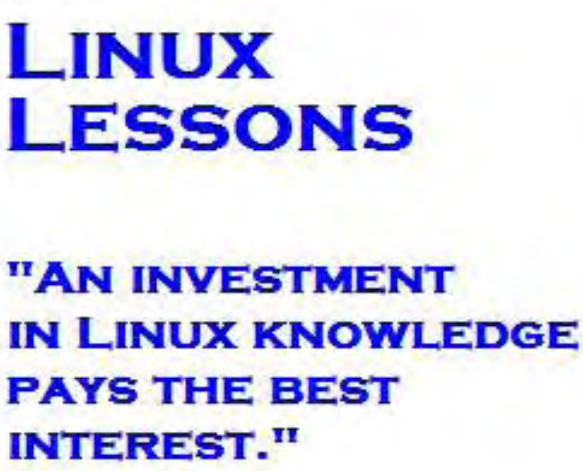

Linux Lessons: Tips and Tricks from Users

“Secure Locate Shell File” by Tony J. Podrasky

Tony offers a shell file called slocate that provides a secure way to index and quickly search for files on your system.

Filename: slocate

Use: Find files on your system *really fast*.

From: <manpage slocate>

Secure Locate provides a secure way to index and quickly search for files on your system. It uses incremental encoding just like GNU locate to compress its database to make searching faster, but it will also store file permissions and ownership so that users will not see files they do not have access to.

Example:

```
tonyp% slocate xyzzy
/home/tonyp/xyzzy
tonyp%
```

<slocate>'s database is usually updated during the night when the lusers are home in bed—because it really hogs system resources for a few minutes. If you have a HDD that you can hear doing its seeks, try running <updatedb> and you'll really hear a racket for about two to five minutes. My ancient workstation (tower) has temperature-controlled cooling fans. When <updatedb> kicks in, you can hear them speed up several times as the CPUs get hotter and hotter—until the fans are really screaming! Once <updatedb> is close to being finished, you can hear the fans slow down until they resume their soft whisper.

If you try to run <slocate> and it complains that the database is old, try running <updatedb> to fix it.

<slocate> is run out of /etc/cron.daily/slocate.cron. <cd> to the cron.daily directory and do a <cat slocate.cron>. You'll see the runtime command. You also may see a list of directories *not* to be included (-e means exclude) when it constructs its database of all the files on the system. I excluded things like my joke / pictures / music / backup directories from being searched.

* * *

```
Silly Signature Du Jour:
Tony J. Podrasky | Back in my day we didn't have virtual reality or
                 | video games. If an axe-wielding one-eyed razorback
                 | barbarian warrior was chasing after you, you just
                 | had to hope you could outrun him.
-:-ETX-:-
```

NOTE: I give my shell files uppercase names so that ***I know*** they are my shell files and not the system's binaries. For example, when I save the data (the commands between the "CUT HERE" lines, which is the actual shell file) I might call it "VI", which is ***not*** to be confused with the system's "vi" file—but I call it "VI" because it calls (or uses) the system's "vi editor."

Tony has been in the computer field since 1976 when he started working for Data General Corp as a field engineer. Later going on to design hardware interfaces, write patches for operating systems, and build networks. It was in 1995 while working with the military on several projects that he ran into a "spook" who showed him a laptop that ran a then-unknown O/S called "Linux." "A laptop running a form of UNIX tony = a marriage made in heaven!" Tony can be reached for questions at Linux Questions for Tony (*hunybuny@netzero.net*).

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Beyond Personal Computing

“Suffering with Software: Bumpy Files, Drug Dealers, and Destroyed Space Probes” by Marilyn K. Martin

Sometimes software problems are caused by bugs or developers—it isn't always a case of user error. Marilyn shares some humorous anecdotes on how software can go wrong.

Software developers take a lot of abuse. And, as you get to the bottom of this column, can cause a lot of expensive damage with one minor error or bug. Sometimes, software developers get impossible to execute orders from the get go, or the specs keep changing. Other times, developers can grow old and gray just chasing bugs, new and old, around in their programs.

When deadlines loom, some software is released that hasn't been totally "de-bugged." Some companies have even paid freelance de-buggers up to $3,000 to find bugs in their software. Other companies refuse this approach. And with more sophisticated hackers now on the loose, some security experts suggest putting pressure on software companies to make their initial software more secure.

So the pressure is on! And, to be fair, not all software problems are caused by bugs or developers. Read on.

Soft Pxocl Is Between the Ears

"Hello? Help Desk? I think I've got the wrong software installed in my computer. I bought this mini-tower system from you guys, and it came loaded with software called the 'XYZ Desktop'."

The Help Desk Tech was unsure what the customer wanted. "Uh, OK. Is there a problem?" "I think so!" answered the customer. "Shouldn't it be called the 'XYZ Mini-Tower' instead of 'Desktop'? So you understand now why I'm pretty sure I have the wrong software installed in this computer?"

Then there was the irate dentist who called to complain that his custom office software package was too slow. "It takes the receptionist thirty minutes to enter one appointment! This package is a piece of *$!%! Come down this afternoon and get it out of here!" The package-writer calmed the dentist down, offering to rewrite any portion of the software that wasn't executing correctly.

So that afternoon, he sat down with the receptionist to watch her use the software. A phone appointment came in, and the receptionist started typing: S.....m.....i.....t.....h. He had never seen hunting and pecking so agonizingly slow. So now he understood why it took her thirty minutes to enter one appointment. He just

wasn't sure how to explain to the dentist that this wasn't a software problem.

A man owned a small business, and for some unknown reason possessed a copy of a particularly nasty program on a floppy. He labeled it INCREDIBLY DANGEROUS! and kept it in a locked box, since it could erase the entire hard drive of whatever computer it was loaded on.

One day the owner hired a man to work in the store. This man somehow found this dangerous floppy and...popped it into the company's computer and turned it on. As predicted, the entire hard drive was erased. His explanation? "Gosh, I just wanted to see what it would do!"

Insufficient Understanding for Installation

A customer called up her Software Support number to report that she was having a problem installing their software. "I've got an older computer, and every time I type INSTALL, all it says is 'Bad command or file name'." The Tech ran through the usual troubleshooting questions, but couldn't figure out the problem.

"Are you sure you're typing I-N-S-T-A-L-L and then hitting the Enter key?" he asked. The customer replied, "Well, sorta. Since my 'N' key is stuck, I've been using the 'M' key instead. Does that matter?"

A user called up Tech Support to report a problem trying to install their software. "So do I put the serial number in the box that says 'serial number,' or do I put it in the box that says 'company'?"

A guy went over to help his best friend's family set up a new PC. When all the hardware was up and ready, it was time to install the software. That's when his friend's father picked up the Windows 95 box and asked his wife, "So how do they get this whole box into that computer?"

Tech Desperation: "OK, I'm Not Supposed to Tell You This, But..."

A newspaper columnist needed some training on the new story editing software. The Tech went to his office and trained him on the most basic features of the system. But the columnist wanted more: "You're the technician for this stuff. Why can't you have it get the news from the wire agency, then write some software to select what I need, merge the text, and have my files automatically done?"

The Tech realized that the columnist expected magical software that would write the news articles for him! The Tech couldn't convince the columnist that this was impossible, so he resorted to a tiny lie: "You're not supposed to know this, but I've already talked to your supervisor about just such software. But we agreed that it costs too much, and it's not covered by the government's financial plans for the newspaper industry." The editor understood THAT, and agreed he needed to go back to typing in his own articles.

One day a user called a computer store to complain he had a "smoking power supply." Incredibly, the user was convinced that this was a software, not hardware, problem. He was convinced that there was "some command" that he could install in the proper file that would eliminate his smoking hardware.

Unable to convince the user otherwise, the exasperated Techs told a tiny lie: "We're not supposed to tell you this, but there is a hidden command in some versions of DOS that you can use." They gave the user a bogus DOSNOSMOKE command, and told him to reboot. When the user said his power supply was still smoking, the out-of-answers Techs told him to call his software company to ask for a nosmoke.exe patch.

The Techs were still shaking their heads hours later, when the user called back. He'd called his software company, who had told him another tiny lie, that their nosmoke.exe patch was incompatible with his power supply. So now the

user was ready to ask the computer store for a new power supply.

Bumping along with .BMP

A university student came in to the Computer Lab one day to ask, "I have a picture on my computer at home that I want to load into WordPerfect here, but it says that it's an unknown file format." The Lab Supervisor told her that "It needs to be BMP, TIF or WordPerfect Graphic for WordPerfect to be able to use it."

The student responded, "OK, no problem. I'll bring in the BMP version." Sure enough, the next day the student approached the Lab Supervisor with a JPEG file that had been renamed to have a .BMP extension.

One customer assured Tech Support, "Yeah, my Internet Explorer can only save pictures as bumpy (.BMP) files."

How Software Developers Are Like Drug Dealers

• Both refer to their clients as "users."

• Both are generous—at first. ("The first one's free!" / "Download a free trial version!")

• Both have important Asian connections.

• Both realize there's a ton of cash to be made in the 14-25 year old market.

• Both have clients who love their stuff when it works. But want to kill them when it doesn't work.

• Both offer a "fix" when things go wrong, and it can be quite expensive.

• Both careers have a lot of people getting rich while still teenagers.

• Both offer products that cause unhealthy addictions.

True (and Very Expensive) Software Disasters

In 1962, the Mariner 1 rocket with a space probe was launched and headed to Venus. Shortly after launch, however, it diverted from its flight path, and Mission Control destroyed it. The handwritten formula had been transcribed into computer code and a single superscript bar had been missed. So the erroneous software treated normal variations of velocity as a serious issue, causing faulty corrections that sent the $18.5 million dollar rocket off course.

In 1982, the Soviets purchased a Canadian computer system to control their gas pipelines, which was just a suspected cover to steal sensitive U.S. technology. So the CIA allegedly sabotaged the software, so that it would pass Soviet inspection but fail in operation. The result was a build-up of intense pressure in the Trans-Siberian gas pipeline, that caused the largest man-made, non-nuclear explosion in known history.

in 1983, the Soviet Early Warning System falsely indicated that the United States had launched five ballistic missiles. Fortunately, the Soviet Duty Officer had "a funny feeling in my gut." He quickly reasoned that if the U.S. was really attacking, they would launch more than five missiles. Turns out that a bug in the Soviet software failed to filter out false missile detections caused by sunlight reflecting off cloud-tops.

In 1985, Canada's Therac-25 radiation therapy machine malfunctioned and delivered lethal radiation doses to patients. Three patients died, and three patients were critically injured. A subtle software bug called a "race condition" enabled the technician to accidentally configure the Therac-25 so that the electron beam would fire in high-power mode on

unshielded patients.

In 1998, NASA's Mars Climate Orbiter arrived at Mars, and fired its engines to push it into orbit around Mars. The engines fired, but the spacecraft ended up falling and crashing onto Mars. The software that controlled the Orbiter thrusters had used imperial units (pounds of force), rather than metric units (Newtons) as specified by NASA. It was a $125 million loss.
(You can read the entire list of "20 Famous Software Disasters" at http://www.devtopics.com/20-famous-software-disasters/)

(Many of these amusing anecdotes can be found on multiple computer sites. But special thanks to *Rinkworks.com*, *devtopics.com*, *computer-jokes.net*, and *computerjokes.net*)

Marilyn is a freelance writer and humorist with many interests. She has sold teen anti-drug articles, as well as had numerous esoteric articles published. She has almost seventy mini-articles on Helium.com (*www.helium.com/users/573405/show_articles*), and is writing a humorous Young Adult Science Fiction series, *Chronicles of Mathias*. Volumes One and Two have received a "Gold Star for Excellence" from TeensReadToo.com (*www.teensreadtoo.com/ReptilianRebirth.html*), and are available from most on-line bookstores.

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Editor's Letters: Tips and Thoughts from Readers

"Computer and Internet tips, plus comments on the articles and columns." by ComputorEdge Staff

"Streaming Video," "Network Monitoring Software"

Streaming Video

[Regarding Jack Dunning's July 29 article, "Streaming Video Storms the World of Entertainment":]

Congratulations for the best discussion of streaming video that I have seen to date. It certainly gave me a better understanding of all of the current choices.

One omission was the speed factor of the particular ISP one is using. We happen to live in an area where the distance from our local ATT "central office" is such that our download speed is usually under 1.00 Mbps. We understand Netflix recommends a minimum of 1.50 Mbps. Would you agree that could be a problem for some potential customers or are we unduly concerned?

If you have time to reply, we would value your insight.

Thank you,

-D. Chase, San Marcos, CA

Great article. Several things came to mind as I read it. If DVDs are on the way out in favor of streaming, does this also mean that 5.1 audio, subtitles, alternate audio tracks, and other special features are going to go away as well? Currently, Netflix streaming offers none that stuff.

The move to streaming also puts pressure on the ISP and server companies that have to store and deliver bandwidth hungry movies. If everybody starts streaming, look to your ISP for higher charges in the future.

While TVs offer increasingly better picture quality, content providers are offering increasingly compressed video. Seems like they are working in opposite directions.

Another thing that you only touched on is advertising. So much of the content out there, commercial TV for example, exists solely for the deployment of advertising. One of two things must be on the way, either higher prices for consumers to offset lost add revenue, or streaming full of annoying ads.

Another effect of the move to streaming is that puts an end to practice of rent, rip and return of disks. That's something that Hollywood has a keen interest in probably.

-Scott, Irvine, CA

Jack,

You forgot to mention that Internet service providers, such as broadband (cable Internet service) and now AT&T DSL (phone wire Internet), are now putting 150 gig data-caps in the monthly service. Broadband providers have been doing it since 2008 with a 250 gig data-cap.

I share a four bedroom house with my mother and my sister and my sister's husband. We all share the same Internet service. We switched from broadband to DSL because the broadband service was not that great here at IV.

Just last month we called the DSL service provider because we were experiencing a dramatic slow down in the feed when watching Netflix. We didn't have that problem before. Customer service told us that we already have reached our limit data cap for the month, We were questioning that because we signed up on an unlimited DSL service contract.

-JD, Calexico, CA

Good article, but written in a vacuum from an Internet provider perspective, which may invalidate the calculated break even point. I believe the subject of Internet service providers instituting CAPS on data downloads is worthy of its own follow up article.

Using Comcast as an example, Comcast OnDemand is simply not competitive from a pure price-per-view perspective with Netflix. However, if Comcast is your Internet provider, they have semi-monopoly power over how you use their service (and they are lobbying for more)—hence the recent net-neutrality debate. Once you reach Comcast's self-determined monthly download limit, they will charge you an additional fee per MB or GB, and/or slow down your downloads. BTW, they don't count downloads of their own OnDemand products against your monthly allowance.

So in this example, Comcast effectively has the ability to raise the price of your Netflix downloads or affect streaming performance. If you don't have access to another broadband provider, you may be out of luck. Unrestricted (by provider) broadband service is already threatened, and will likely soon be a thing of the past. Also, be aware, that wireless providers are now pursuing the same practices.

-Mike

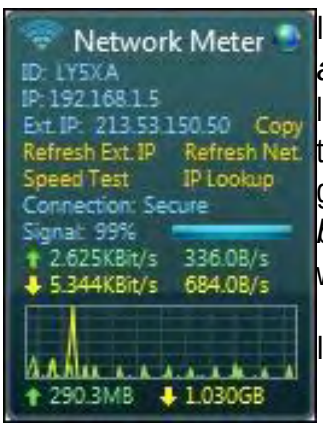
Network Monitoring Software

[Regarding the July 29 Digital Dave column:]

I have included a link to a piece of software, WhatsUp Gold (*www.whatsupgold.com/products/download/*), that may be what Steve from Escondido needs to monitor his router.

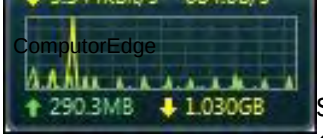
-Buck-O

Steve,



I use a gadget on my computer called Network Meter (*gallery.live.com/liveItemDetail.aspx?li=86656dc5-b0fe-489d-b115-44a76e050f63*). While it doesn't show router lights, it can be set to monitor a particular network card. The little graph continually moves as the numbers change giving a feeling similar to watching router activity. When included with gadgets which display CPU usage (*gallery.live.com/results.aspx?bt=1&pl=1&q=cpu*), you can set up quite an instrument panel for displaying the inner workings of your computer and network.

I did look for a gadget to show router lights, but only found one which would ping any



selected network (*gallery.live.com/liveItemDetail.aspx?li=47cfe671-a816-4886-98ed-15bff0f12596&bt=1&pl=1*) device to tell you if it was online.

-Jack Dunning, *ComputorEdge*

ComputorEdge always wants to hear from you, our readers. If you have specific comments about one of our articles, please click the "Tell us what you think about this article!" link at the top or bottom of the specific article/ column at ComputorEdge.com (*webserver.computoredge.com/online.mvc?src=ebook*). Your comments will be attached to the column and may appear at a later time in the "Editor's Letters" section.If you want to submit a short "ComputorQuick Review", or yell at us, please e-mail us at *ceeditor@computoredge.com*.

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